DOCKETED	
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Project Title:	SMUD Cogeneration Pipeline
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Document Title:	SMUD Cogeneration Pipeline Project - Petition to Amend
Description:	Installation of two new service connections.
Filer:	Mary Dyas
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STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AD DEVELOPMENT COMMISSION

In the Matter of:	)	**Docket No. 92-AFC-02P**
	)	
SMUD Cogeneration	)	**SMUD'S PETITION FOR**
Pipeline Project	)	**POST-CERTIFICATION**
	)	**LICENSE AMENDMENT**
	)	

The Sacramento Municipal Utility District ("SMUD"), owner of the SMUD Cogeneration Pipeline Project (the "Project") approved and licensed by the California Energy Resources Conservation and Development Commission ("Commission") Order No. 94-0511-01(b) ("Decision"), hereby submits this Petition for Post-Certification License Amendment ("PTA") pursuant to Section1769(a), Title 20, California Code of Regulations. By this Petition SMUD proposes to install two new service connections on the Project pipeline to allow the current gas supplier to continue providing service to two customers adjacent to the Project, as described more fully in the PTA.

SMUD requests that staff determine there is no possibility that the modifications may have a significant effect on the environment, and that the modifications will not result in a change or deletion of a condition adopted in the Decision or make changes that would cause the Project not to comply with any applicable laws, ordinances, regulations, or standards.

As an officer of SMUD, I hereby attest, under penalty of perjury, under the laws of the State of California, that the contents of this PTA are truthful and accurate to the best of my knowledge and belief.

Respectfully submitted,

SACRAMENTO MUNICIPAL UTILITY DISTRICT

LAURA LEWIS, Chief Legal Officer and General Counsel

Dated: December 4, 2019

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Installation of New Pipeline Service Connections for the SMUD Pipeline Project (92-AFC-02PC)

Petition for Modification

December 2019

Sacramento Municipal Utility District

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Acronyms and Abbreviations

AP	Air Products and Chemicals, Incorporated
ARMR	Archaeological Resources Management Report
BMP	Best Management Practice
CalEEMod	California Emission Estimator Model
CCR	California Code of Regulations
CEC	California Energy Resources Conservation and Development Commission
CEQA	California Environmental Quality Act
CHRIS	California Historical Resources Information System
CO	carbon monoxide
COCs	Conditions of Certification
CPM	Compliance Project Manager
CRM	cultural resource monitor
CRMMP	Cultural Resources Monitoring and Mitigation Plan
CRR	Cultural Resources Report
CRS	cultural resource specialist
LORS	laws, ordinances, regulations, and standards
NCIC	North Central Information Center
NOx	oxides of nitrogen
PG&E	Pacific Gas and Electric Company
PM_{10}	particulate matter less than 10 micrometers in aerodynamic diameter
$PM_{2.5}$	particulate matter less than 2.5 micrometers in aerodynamic diameter
P&G	Procter & Gamble Company
PGCP	Procter & Gamble Cogeneration Project
PTA	Petition to Amend
ROC	reactive organic compounds
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMUD	Sacramento Municipal Utility District
SO_2	sulfur dioxide
VOC	volatile organic compound
WEAP	Worker Environmental Awareness Program

1. Introduction

On May 11, 1994, the California Energy Resources Conservation and Development Commission (CEC), in its Order No. 94-0511-019(b) in Docket No. 92-AFC-02PC (Decision), approved the Application for Certification (AFC) for the Sacramento Municipal Utility District (SMUD) Cogeneration Pipeline Project (Project) and granted SMUD as the project owner a license to construct, own, and operate the Project. The Project is a two segment (lines 700A and 700B), 50-mile natural gas pipeline (the SMUD Pipeline) that connects to two Pacific Gas & Electric Company (PG&E) natural gas pipelines (#400 and 401), originating north of Winters California. The SMUD Pipeline provides natural gas to SMUD's Sacramento County generation facilities (Campbell Soup, Carson Ice-Gen, and Procter and Gamble Cogeneration Projects). A separate natural gas pipeline segment was installed in 2006 to connect the Project to the Cosumnes Power Plant. This segment, line 800C, is connected at the Carson Ice-Gen facility and was constructed under the CEC's certification and license for the Cosumnes Power Plant (Docket No. 01-AFC-19C).

The Project license has been amended four times, with the first amendment in 2001 permitting SMUD to relocate 4,900 feet of the SMUD Pipeline. This amendment was approved by Staff. The next amendment occurred in 2007 and permitted SMUD to relocate a segment of the line to allow for an interchange to be constructed along Interstate 5. The third and fourth amendments occurred in 2009 and permitted SMUD to upgrade metering/regulating equipment and to relocate a 150-foot segment of the line to allow Yolo County to realign a roadway.

SMUD is submitting this request for post-certification license amendment (PTA) to allow for the installation of two service connections on the SMUD Pipeline near the Procter & Gamble Cogeneration Project (PGCP) site. SMUD was approached by the local natural gas supplier (Supplier) to install two service connections near PGCP to allow adjacent businesses (Procter & Gamble Company and Air Products and Chemicals, Incorporated) to continue operation. The Supplier determined that the existing natural gas distribution pipeline had reached the end of its life and would be shut down in March 2020. In order to continue natural gas service to these two customers, the Supplier determined the least environmentally impactful approach would be to request SMUD install two new service connections on the SMUD Pipeline to allow the Supplier to service its customers.

1.1 Overview of Proposed Amendment

This PTA addresses the construction impacts associated with the installation of the two new service connections on the SMUD Pipeline. The two service connections will not change the quantity or quality of the natural gas going to SMUD's cogeneration facilities, nor will they result in any operational impacts. The two adjacent businesses currently use natural gas provided by the Supplier, and the Supplier will continue to service these businesses with the same quantity/quality of natural gas, which will be conveyed via SMUD's Pipeline. A detailed description of the proposed modification is included in Section 2.0. The Project vicinity is presented in Figure 1.

1.2 Necessity of Proposed Changes

The CEC Siting Regulations require a discussion of the necessity for the proposed revisions to certification and whether the amendment is based on information known by the petitioner during the certification proceeding (Title 20, CCR, Sections 1769 (a)(1)(B) and (C)).

The proposed changes will not impact the function or operation of the SMUD Pipeline or Project, nor will it alter the basis of the Commission Decision. (CEC, 1994). However, implementation of the proposed changes will allow existing local businesses to continue to operate while minimizing environmental/economic impacts.

1.3 Need for Modification was Not Known at the Time of Certification

The need for the two new service connections on the SMUD Pipeline did not arise until the Supplier identified the need to decommission its pipeline and were not considered when the Project was licensed in 1994.

1.4 Why the Change should be Permitted

The proposed Project revision would allow the two adjacent businesses to continue to operate while minimizing the environmental/economic impacts.

1.5 Consistency of Proposed Changes with Applicable Laws, Ordinances, Regulations, and Standards

The CEC Siting Regulations also require a discussion of the consistency of the proposed project revision with the applicable laws, ordinances, regulations, and standards (LORS) and whether the modifications are based on new information that changes or undermines the assumptions, rationale, findings, or other basis of the final decision (Title 20, CCR, Section 1769 (a)(1)(D)). If the project would no longer be consistent with the decision as the result of requested project modifications, the PTA must provide an explanation as to why the modification(s) should be permitted.

The proposed Project modifications requested by the PTA are consistent with all applicable LORS, as discussed in Section 3.0. This PTA is not based on new information that changes or undermines any basis for the Commission Decision (CEC, 1994). SMUD would continue to operate in compliance with all applicable LORS. Therefore, the findings and conclusions contained in the Commission Decision (CEC, 1994) would remain applicable to the Project, as modified.

1.6 Summary of Environmental Impacts

The CEC Siting Regulations require that an analysis be conducted to address the potential impacts the proposed modifications may have on the environment and to propose measures to mitigate any potentially significant adverse impacts (Title 20, CCR, Section 1769 (a)(1)(E)). The regulations also require a discussion of the modification(s) impact on the Project's ability to comply with applicable LORS (Section 1769 (1)(a)(F)). Section 3.0 of this PTA includes a discussion of the potential environmental impacts associated with the modification(s) as well as a discussion of the consistency of the modification(s) with the LORS. Section 3.0 concludes that there would be no significant environmental impacts associated with implementing the actions specified in this PTA and that the Project, as modified, will comply with all applicable LORS and will provide an environmental/economic benefit.

1.7 Conditions of Certification

This PTA proposes to construct two new service connections on the existing SMUD Pipeline. As demonstrated in Section 3 of this PTA, the Project does not result in a new significant impact requiring mitigation. Therefore, no new Conditions of Certification (COCs) are required and revisions to existing COCs are not necessary to accommodate the proposed modification(s).

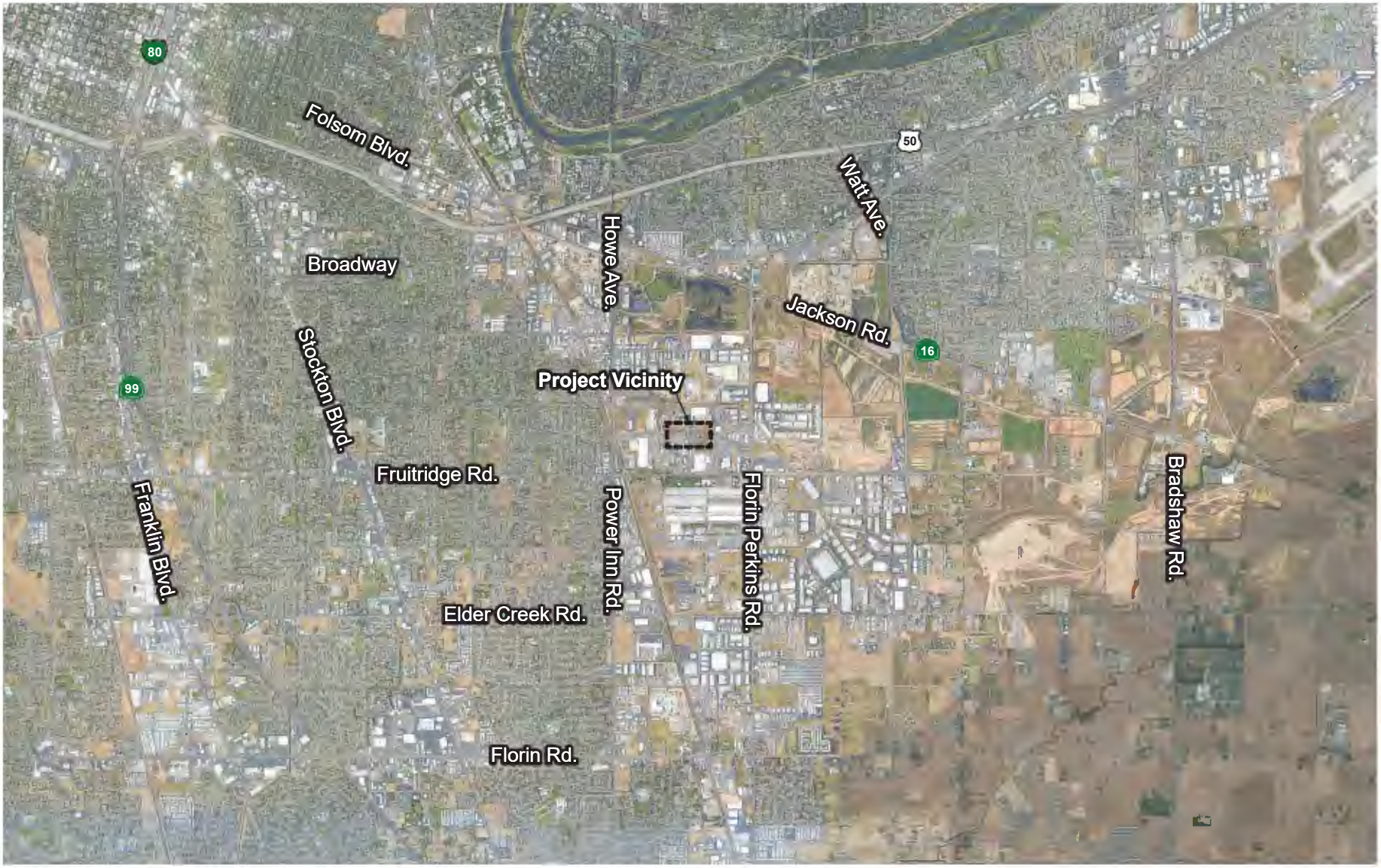

Figure 1. Project Vicinity
SMUD Cogeneration Pipeline Project
Petition to Amend

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2. Description of Proposed Amendment

The local natural gas Supplier has requested SMUD provide two natural gas service connections in the area of the Sacramento Cogeneration Authority's Proctor & Gamble Cogeneration Project (PGCP) (93-AFC-02C). The first service connection will be located on the PGCP project site to convey Supplier-owned natural gas to the customer, Procter & Gamble, using a 4-inch connection from the SMUD Pipeline at the metering/regulation station that supplies natural gas to the PGCP. The second service connection will occur within 83rd Street, adjacent to PGCP, just south of the PGCP entrance. This service connection will provide natural gas to the Air Products plant located on the east side of 83rd Street using a 4-inch pipeline. The Project vicinity is zoned by the City of Sacramento as heavy industrial (M-2S), with industrial uses surrounding the Project vicinity. These service connections are discussed below in greater detail.

2.1 Service Connection 1 – PGCP Gas Metering Yard

This service connection involves the installation of a 4-inch above-ground tee in the existing SMUD Pipeline to the PGCP natural gas piping located in the fuel metering area located on the southern fence line. A natural gas pipe stub from the new tee extend though the PGCP fencing several inches into the adjacent parcel owned by Proctor and Gamble. The tee, check valve, two new pipe supports, and remotely operated shut-off valve will be installed between two existing flanges. The pipe supports will require a concrete footing (between 18 and 48 inches deep by up to 18 inches in diameter) to be installed. The Supplier will be responsible for any pipeline construction beyond the PGCP fence line. This connection will not impact the PGCP operation but will require some minor trenching onsite to install control wiring on the PGCP site. Figure 2 shows the location of this service connection on the PGCP site.

2.2 Service Connection 2 - 83rd Street Service Connection to Air Products

The second connection is located on 83rd Street, approximately 220 feet southeast of the PGCP property line. The SMUD Pipeline runs north along 83rd Street to the PGCP (along the western side of the street). The Supplier requested a 4-inch connection be installed on SMUD's Pipeline to convey natural gas, between the connection and the Air Products gas metering station, approximately 75-feet due east. The 4-inch connection and pipeline will require excavation of portions of 83rd Street, the adjacent sidewalk, and the landscaping area on the eastern side of 83rd Street. A pit, up to 12 feet wide by 10 feet deep, and a trench up to 90 feet long, 10 feet deep and up to 6 feet wide will be required to install the 4-inch pipeline on the SMUD Pipeline. A vault will be placed over the completed pipeline connection, which will include a shutoff valve. The pipeline will transition above ground on the Air Products site where it will be completed with a remote shut-off and check valves. The pipeline service connection will be constructed consistent with applicable laws, ordinances, regulations, and standards. After construction is complete, the new 4-inch pipeline extension will be hydrotested and cleaned. All portions of the service connection will be completely (100 percent) radiographed prior to the line being placed into service. The excavation will be backfilled/ compacted, and the roadway, sidewalk, and landscaping areas will be restored to pre-disturbance condition. Figure 3 shows the location of this service connection on the PGCP site.

Construction is expected to take three weeks to complete and will occur between the hours of 7 am to 6 pm, Monday to Saturday consistent with the City of Sacramento Municipal Code.[1] Construction is scheduled to be completed in the 1st quarter of 2020. Construction is expected to require up to 20 construction workers and a maximum of 7 pieces of construction equipment (excluding on-road pickup trucks used to commute to the site). Table 2-1 presents the construction workforce by labor classification and Table 2-2 presents the construction equipment by type. Construction work crews will range from 20 workers during excavation and pipe installation to 5 workers during pipeline testing.

Excavations may produce approximately 470 cubic yards of soil for disposal to allow for the installation of the pipeline with the necessary bedding material. Soils excavated from the trench will be stockpiled at

[1] Sacramento Municipal Code - Title 8 Health and Safety Chapter 8.68.080(E).

either the Air Products, Procter and Gamble, or PGCP facility in a manner consistent with applicable best management practices (i.e., covered with plastic and stormwater control measures installed as appropriate). The disposal of unusable soils and the import of engineered fill will require up to 34 truck trips. An estimate of daily worker and truck trips is presented in Table 2-3.

During pipeline testing, up to 200 gallons of hydrotest water will be required. This water will be collected at the end of the test and returned to SMUD's corporate yard for disposal. Disposal will include passing the used hydrotest water through an oil/water separator, which discharges to the sanitary sewer system.

Table 2-1. Construction Workforce by Classification

Week	1	2	3
Labor Classification			
Laborers	10	10	10
Electricians	0	0	2
Pipefitters	2	2	2
Operating Engineers	3	3	3
Cement Finishers	0	0	5
Total Craft Labor	15	15	15
Total Supervision	5	5	5
Total Staffing	20	20	20

Table 2-2. Construction Equipment

Week	1	2	3
Description			
Excavators	1	0	1
Backhoe	1	0	1
10 Wheel Dump Truck	1	0	1
Front End Loader	0	0	1
75 Ton Hydraulic Crane	0	1	0
Grader	0	0	1
Compactor	0	0	1
Water Truck	1	1	1

Table 2-3. Construction Trip Generation

Trip Type	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Delivery/Haul Trucks	20	20	40	17	17	34
Workers	15	0	15	0	15	15
Total Construction Traffic	35	20	55	17	32	49

No operational impacts are expected in connection with the proposed modification(s).

The potential environmental impacts associated with the construction of the two service connections are evaluated in Section 3.0.

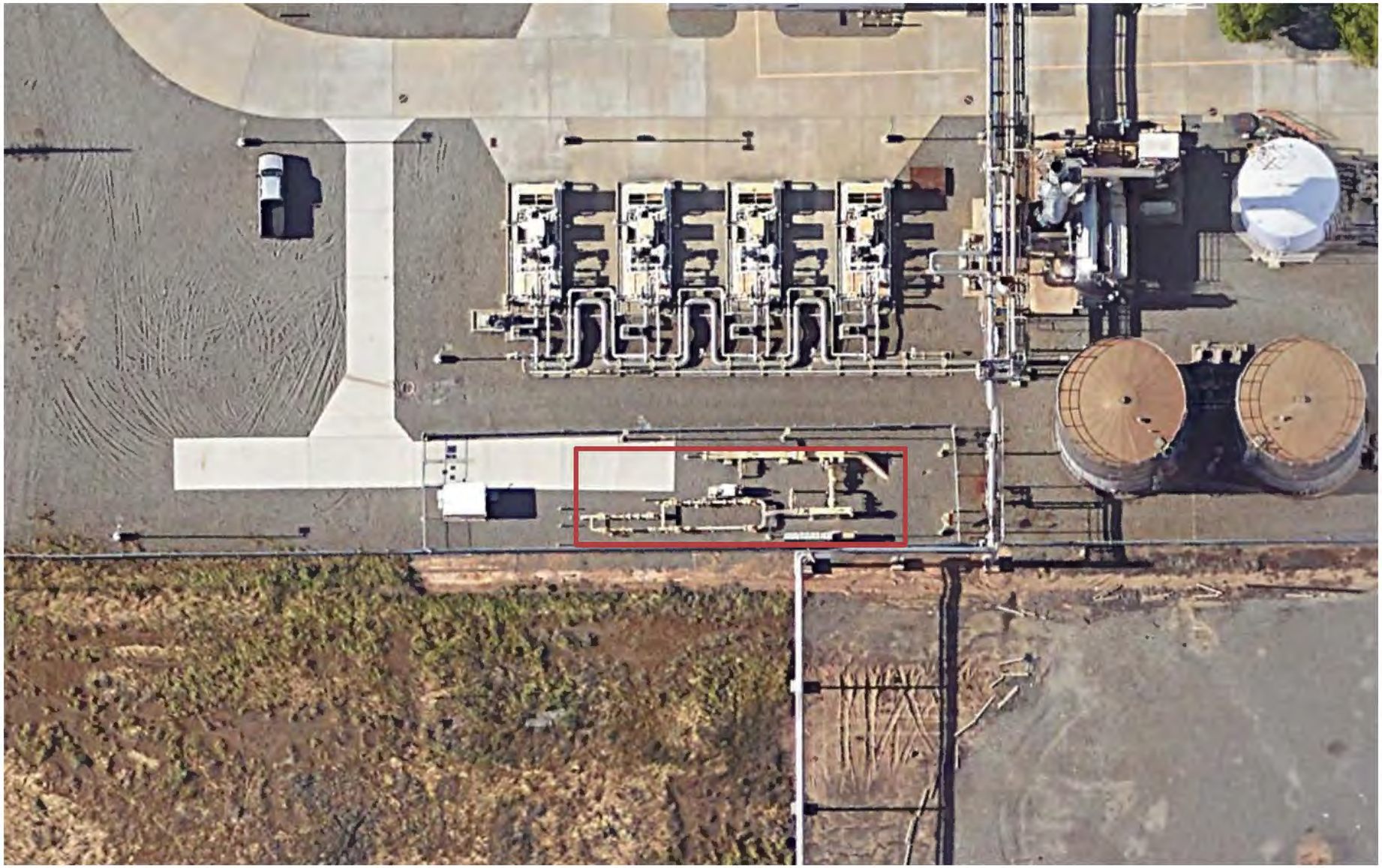

Figure 2. Service Connection 1
SMUD Cogeneration Pipeline Project
Petition to Amend

LEGEND

Connection 1

North

0 25 50

Approximate scale in feet

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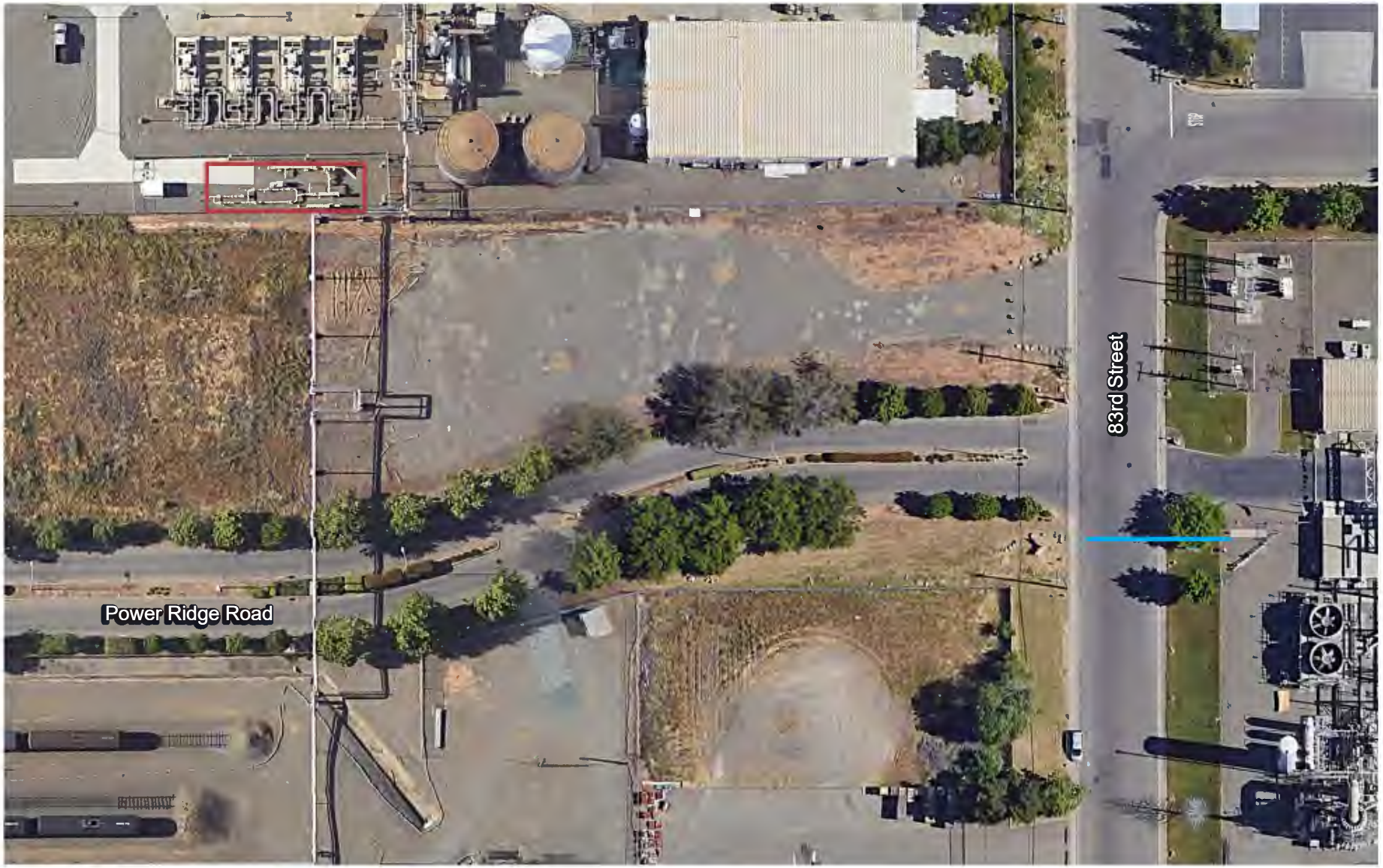

Figure 3. Service Connection 2
SMUD Cogeneration Pipeline Project
Petition to Amend

LEGEND

Connection 1

Connection 2

North

0 50 100

Approximate scale in feet

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3. Environmental Analysis of Proposed Project Amendment

The proposed changes to the SMUD Pipeline include the construction of the two natural gas service connections. Both connections will require excavation in areas where excavation has previously occurred. Furthermore, the proposed modifications are not expected to result in any operational impacts as the two service connections will require minimum maintenance and the receiving facilities already use natural gas. As a result, the impact analysis for most of the environmental disciplines would not differ significantly from what was described in the AFC and Commission Decision. As described below, the impacts associated with this PTA will be less than significant.

The following subsections present a discussion of the potential impacts that the proposed project modification(s) may have on the environmental analysis, as presented in the AFC. More detail is provided for those areas where the potential for a significant impact exists.

3.1 Air Quality

The Project will be located in Sacramento County. Sacramento County is currently classified as "attainment" for the state and federal ambient air quality standards for all pollutants except the federal 8-hour ozone and ultra-fine particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) standards, and the state ozone and particulate matter less than 10 microns in diameter (PM_{10}) standards.

The project construction is anticipated to start in February 2019 and will last for 3 weeks. Construction emissions from the Project would include engine exhaust from off-road construction equipment, and vehicle trips traveled by construction workers and delivery/haul trucks. These emissions would primarily consist of carbon monoxide (CO), nitrogen oxides (NO_x), particulate matter less than 10 micrometers in aerodynamic diameter (PM_{10}), particulate matter less than 2.5 micrometers in aerodynamic diameter ($PM_{2.5}$), sulfur dioxide (SO_2), volatile organic compounds (VOC), and greenhouse gases (GHG). In addition, earth moving activities would result in fugitive dust emissions.

The construction emissions were estimated using the California Emission Estimator Model (CALEEMOD, Version 2016.3.2) (CAPCOA, 2016) based on anticipated construction duration, equipment usage, and number of vehicle trips. Project specific construction information used in the CalEEMod modeling are summarized in Tables 2-1 through 2-3, and assume up to 470 cubic yards of soil are removed from the site. Default equipment settings such as equipment horsepower rating and load factors in CALEEMOD were used when project-specific information was not available. CalEEMod modeling output results are presented in Appendix 3.1.

Table 3.1-1 Project Construction Emissions Estimate

	VOC	CO	NO_x	SO_2	PM_{10}	$PM_{2.5}$	GHG (as CO_2e)
Maximum Daily (lb/day)	3.7	25.3	49.2	0.1	3.1	1.7	11,206
Maximum Annual (ton/year)	0.03	0.2	0.4	<0.1	<0.1	<0.1	77

In order to reduce emissions during construction, and in compliance with the Sacramento Metropolitan Air Quality Management District (SMAQMD) Rule 403, SMUD will implement the following Best Management Practices (BMPs):

- Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways would be covered.

- Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day.
- Limit vehicle speeds on unpaved roads to 15 miles per hour.
- All roadways, driveways, sidewalks, parking lots to be paved would be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes. Provide clear signage that posts this requirement for workers at the entrances to the site.
- Provide current certificates of compliance for CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation
- Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment would be checked by a certified mechanic and determine to be running in proper condition before it is operated.

The SMAQMD has adopted thresholds of significance for air quality impact analysis, as presented in the *CEQA Guide to Air Quality Assessment in Sacramento County* (CEQA Guide, SMAQMD 2009, updated through July 2019). Table 3.1-2 presents a comparison of the estimated project construction emissions to SMAQMD CEQA thresholds.

Table 3.1-2 Comparison of Project Construction Emissions to the SMAQMD CEQA Thresholds

	VOC	CO	NO_x	SO_2	PM_{10}	$PM_{2.5}$	GHG (as CO_2e)
Maximum Daily (lb/day)	3.7	25.3	49.2	0.1	3.1	1.7	11,206
Maximum Annual (ton/year)	0.03	0.2	0.4	<0.1	<0.1	<0.1	77
SMAQMD CEQA Thresholds	None	None	85 lbs/day	None	Zero (0). If all feasible BACT/BMPs are applied, then 80 lbs/day and 14.6 tons/year	Zero (0). If all feasible BACT/BMPs are applied, then 82 lbs/day and 15 tons/year	1,100 metric tons/year

Note:

Source: *Guide to Air Quality Assessment in Sacramento County* (SMAQMD 2009, updated through June 2019).

CO_2e: CO_2 equivalent

BACT/BMPs: Best Available Control Technology/Best management practices.

Lbs/day = Pounds per Day

Project construction emissions are expected to be less than the SMAQMD's numeric CEQA thresholds, as shown in Table 3.1-2. The expected PM_{10} and $PM_{2.5}$ emissions are below the numeric CEQA thresholds, applicable due to use of BMP. Therefore, the construction of the proposed service connections onto the SMUD Pipeline would have a less than significant impact on air quality and not be cumulatively considerable.

The 1994 Commission Decision approving the construction of the SMUD Pipeline project found the project to be in compliance with all applicable LORS. The proposed Project is consistent with all applicable LORS and is not expected to alter the assumptions or conclusions made in the Commission Decision.

No modification to Conditions of Certification are proposed.

3.2 Biological Resources

The construction of the two service connections will have minimal effects on biological resources in the Project vicinity because construction activities will occur on a portion of the PGCP site and within an existing roadway/landscape strip. Other than turf and landscaping trees along 83rd Street, no suitable nesting habitat exists in the area. Construction schedule is scheduled to be completed by the end of the 1st quarter of 2020, so the potential to disturb nesting birds is minimal. A preconstruction nesting bird survey will be conducted by a qualified biologist within 14 days of construction, covering a radius of 250 feet from the two work locations. If nesting birds are found, the biologist will evaluate whether existing screening buffers (such as buildings, trees, intervening topography) are sufficient to allow work to proceed and determine what level of work exclusion buffers or nest monitoring is needed. This could result in work areas being reduced in size. If work cannot proceed without disturbing nesting birds, or if signs of disturbance are observed by the monitor, work may be halted or redirected to other areas until the nesting and fledging is complete, or until the nest has otherwise failed due to causes other than the Project's construction or modification.

The construction of the proposed project modifications would not significantly change the biological resources impact analysis conclusions as presented in the 1994 Commission Decision for the Project. Implementation of the biological resource Conditions of Certification (BIO-1 to BIO-4) will reduce any biological resource impacts further.

The Project modification(s) would comply with applicable LORS and would not require any changes to the Biological Resources Conditions of Certification.

3.3 Cultural Resources

Given the extensive disturbance to the areas surrounding the two proposed service connections, a pedestrian cultural resource survey was not performed. Both service connections are located in developed areas and excavation is unlikely to impact native, undisturbed soils.

The industrial nature of the Project area makes the likely presence of architectural resources relatively remote.

Based on a review of the CEC cultural resource analysis of PGCP's 2015 Auxiliary Boiler PTA (CEC 2015), the CEC concluded that the nearest potentially historic resource to the PGCP (which is the site of one of the two service connections and adjacent to the other) consist of four identified architectural resources, none of which were eligible for inclusion on the California Register of Historic Resources.

A new search of the California Historical Resources Information System North Central Information Center was commissioned by Jacobs in connection with this PTA. The results of this search have not been received, but will be known by December 13, 2019 and updates will be provided as indicated.

Based on the previous search conducted in 2015 for the PGCP PTA, there were eight previously recorded resources located within the 1-mile search radius encompassing the vicinity of the PGCP. Eight previous studies have occurred within the 1-mile search radius. No cultural resources were identified as a result of these studies (CEC 2015).

Since the licensing of the SMUD Pipeline, the City of Sacramento has updated its General Plan. General Plan Implementation Policy HCR 2.1.16 requires the City establish City codes requiring cultural resources preconstruction field surveys, research and testing procedures in areas considered high-sensitivity cultural resource areas. Furthermore, this policy requires procedures for the discovery of archaeological resources during construction, regardless of whether the site is in a high-sensitivity area. These procedures include establishing personnel qualifications, and address surveys, research, testing, training, monitoring, cessation and resumption of construction, identification, evaluation, and reporting. This policy is intended to address significant adverse impacts to cultural resources. As a result of this change in circumstance, SMUD proposes the following design measures intended to comply with the City's General Plan requirements for the protection and preservation of cultural resources.

Design Measures

SMUD proposes to implement the following design measures for the construction of the two service connections to comply with the City of Sacramento's General Plan Policy HCR 2.1.16. These design measures will further reduce any already less than significant cultural resource impacts. The design measures are formatted consistent with other measures as applied by the CEC.

CULTURAL RESOURCES PROFESSIONAL QUALIFICATIONS

DM-1 At least 45 days prior to the start of construction (defined as any construction-related vegetation clearance, ground disturbance and preparation, and site excavation activities) on the Project, the project owner shall provide the California Energy Commission (CEC) Compliance Project Manager (CPM) with the following information for review and approval: the name, telephone number, resume, and indication of availability for its designated cultural resources specialist (CRS), as well as any alternate CRS that the project owner might designate. The CRS will be responsible for implementation of all cultural resources conditions of certification and may retain qualified cultural resources monitors (CRMs) to monitor the Project as necessary.

Protocol: The resume(s) shall demonstrate that the CRS and alternate CRS meet the minimum qualifications specified in the U.S. Secretary of the Interior professional qualifications, as published at 36 C.F.R., part 61. In addition, the CRS and alternate CRS shall have the following qualifications:

a) The technical specialty of the CRS and alternate CRS shall be appropriate to the needs of the Project and shall include, a background in anthropology, archaeology, history, architectural history or a related field;

b) At least three years of archaeological or historic, as appropriate, resource mitigation and field experience in California; and

c) The resume shall include the names and phone numbers of contacts familiar with the work of the CRS and alternate CRS on referenced projects and demonstrate that the CRS and alternate CRS has the appropriate education and experience to accomplish the cultural resource tasks that must be addressed during ground disturbance, grading, construction and operation. In lieu of the above requirements, the resume shall demonstrate to the satisfaction of the CPM, that the proposed CRS or alternate has the appropriate training and background to effectively implement the conditions of certification.

CRMs shall meet the following qualifications:

a) A B.S. or B.A. degree in anthropology, archaeology, historic archaeology or a related field and one year of experience monitoring in California; or

b) An A.S. or A.A. in anthropology, archaeology, historic archaeology or a related field and four years of experience monitoring in California; or

c) Enrollment in upper division classes pursuing a degree in the fields of anthropology, archaeology, historic archaeology or a related field and two years of monitoring experience in California.

The CEC CPM will review the qualifications of, and must approve in writing, the project owner's CRS, alternate CRS, and CRMs prior to the start of construction on the Project.

After CEC CPM approval, the CRS or alternate CRS shall be available to conduct preconstruction training and provide monitoring and mitigation, as needed, during all construction activities associated with the Project. The CRS or alternate CRS shall retain CRMs and other technical specialists, if needed. The CEC CPM and staff shall have unrestricted access to and open communication with the designated cultural resources specialist(s) at any time.

Verification: The project owner shall submit the resume for the CRS at least 30 days prior to the start of ground disturbance. At least 10 days prior to a termination or release of the CRS, the project owner shall submit the resume of the proposed replacement CRS. At least 20 days prior to ground disturbance, the CRS shall submit written notification identifying anticipated CRMs for the Project stating they meet the minimum qualifications required by this condition. If additional CRMs are needed later, the CRS shall submit written notice one week prior to any new CRMs beginning work.

WORKFORCE TRAINING AND ON-CALL MONITORING

DM-2 Prior to the start of construction on the Project, and throughout the construction period, the project owner's designated cultural resources specialist will provide overall guidance for protection and management of any cultural resources encountered during ground disturbance. The project owner will ensure that all workers who operate ground disturbing equipment are instructed on how to recognize cultural resources in the field and will provide the workers with a set of procedures for reporting any such resources that may be discovered during project-related ground disturbance.

Verification: At least thirty (30) days prior to the start of ground disturbing activities, the project owner shall submit to the CEC CPM for review and approval a description of the cultural resources instruction to be provided to project construction workers and the set of procedures the workers are to follow when previously unknown cultural resources are discovered.

In the first compliance report after the start of construction, the project owner shall provide the CEC CPM with a signed letter stating that the instruction has been provided to the construction workers (those who started on the first day of construction) during the general worker orientation. The letter shall include a list of the workers who received the cultural resources training. For subsequent project construction phases, the project owner shall list in its monthly compliance report any additional workers who have received the cultural resources training.

POWERS OF THE CRS

DM-3 Prior to the start of construction and throughout the construction period, the project owner's designated cultural resources specialist shall be prepared to implement as needed, the following monitoring and mitigation measures to minimize potential impacts to cultural resources.

Protocol: The monitoring and mitigation measures include the following elements: If known or previously unknown cultural resources are encountered during construction activities, the designated cultural resource specialist shall have the authority to halt or redirect construction at any time necessary to protect the resources and their locational context.

Work in the immediate vicinity of the find shall be halted until the designated cultural resources specialist can determine the significance and sensitivity of the find; how the resources will be protected if construction resumes, and how the mitigation measures will be implemented for recovery of cultural materials;

The project owner, or its designated representative, shall inform the CEC CPM within one working day of the discovery of any potentially significant cultural resources and discuss the specific measure(s) proposed to mitigate potential impacts to these resources.

The designated cultural resources specialist, representatives of the Applicant, and the CEC CPM or designee shall meet within five working days of the notification of the CEC CPM, if necessary, to discuss the disposition of any finds and any mitigation measures already implemented or to be implemented.

If human remains are encountered, the project owner will notify the county coroner's office; if the remains are identified as Native American, the project owner will consult with the California Native American Heritage Commission for appropriate disposition of the remains.

All necessary and required data recovery and mitigation shall be completed within ten days after discovery of the previously unknown cultural resources.

All cultural materials found shall be mapped and all significant cultural resources shall be removed for analysis, and prepared and delivered for curation into retrievable storage in a public repository or museum.

If any cultural resources are found, the project owner shall ensure preparation and filing of appropriate cultural resources report(s) by the designated cultural resources specialist.

Verification: Prior to the start of construction on the Project, the project owner shall notify the CEC CPM in writing that the designated cultural resources specialist is available and prepared to implement any necessary monitoring and mitigation measures for cultural resources.

DM-4 At least 30 days prior to the start of ground disturbance, the project owner shall submit the Cultural Resources Monitoring and Mitigation Plan (CRMMP), as prepared by the CRS, to the CPM for approval.

Protocol: The CRMMP shall identify general and specific measures to minimize potential impacts to sensitive cultural resources. Copies of the CRMMP shall reside with the CRS, alternate CRS, each monitor, and the project owner's on-site manager. No ground disturbance shall occur prior to CPM approval of the CRMMP, unless specifically approved by the CPM. The CRMMP shall include, but not be limited to, the following elements and measures.

1) The following statement shall be added to the Introduction: Any discussion, summary, or paraphrasing of the conditions in this CRMMP is intended as general guidance and as an aid to the userin understanding the conditions and their implementation. If there appears to be a discrepancy between the conditions and the way in which they have been summarized, described, or interpreted in the CRMMP, the conditions, as written in the Final Decision, supersede any interpretation of the Conditions in the CRMMP. The cultural resources conditions of certification are attached as an appendix to the CRMMP.
2) A proposed general research design that includes a discussion of research questions and testable hypotheses applicable to the Project area. A refined research design will be prepared for any resource where data recovery is required.
3) Specification of the implementation sequence and the estimated time frames needed to accomplish all project-related tasks during ground disturbance, construction, and post-construction analysis phases of the Project.
4) Identification of the person(s) expected to perform each of the tasks, their responsibilities; and the reporting relationships between project construction management and the mitigation and monitoring team.
5) A discussion of the inclusion of Native American observers or monitors, the procedures to be used to select them, and their roles and responsibilities.
6) A discussion of all avoidance measures such as flagging or fencing, to prohibit or otherwise restrict access to sensitive resource areas that are to be avoided during construction and/or operation, and identification of areas where these measures are to be implemented. The discussion shall address how these measures will be implemented prior to the start of construction and how long they will be needed to protect the resources from project-related effects.
7) A discussion of the requirement that all cultural resources encountered will be recorded on a DPR 523 Form and mapped (may include photos). In addition, all archaeological

materials collected as a result of the archaeological investigations (survey, testing, data recovery) shall be curated in accordance with The State Historical Resources Commission's "Guidelines for the Curation of Archaeological Collections," into a retrievable storage collection in a public repository or museum. The public repository or museum must meet the standards and requirements for the curation of cultural resources set forth at Title 36, Code of Federal Regulations, part 79.

8) A discussion of any requirements, specifications, or funding needed for curation of the materials to be delivered for curation and how requirements, specifications and funding will be met. The name and phone number of the contact person at the institution. Include a statement in the discussion of requirements that the project owner will pay all curation fees and that any agreements concerning curation will be retained and available for audit for the life of the Project.

9) A discussion of the availability and the designated specialist's access to equipment and supplies necessary for site mapping, photographing, and recovering any cultural resource materials encountered during construction.

10) A discussion of the proposed Cultural Resource Report (CRR) which shall be prepared according to Archaeological Resource Management Report (ARMR) Guidelines.

Verification: The project owner shall submit the CRMMP at least 30 days prior to the start of ground disturbance. Per ARMR Guidelines the author's name shall appear on the title page of the CRMMP. Ground disturbance activities may not commence until the CRMMP is approved. At least 30 days prior to ground disturbance, a letter shall be provided to the CPM indicating that the project owner will pay curation fees for any materials collected as a result of the archaeological investigations (survey, testing, data recovery).

PROTOCOLS AND CRITERIA FOR SURVEY OF SUBSEQUENT AMENDMENTS AND PROJECT MODIFICATIONS

DM-5 Cultural resources surveys conducted to analyze the potential environmental impacts of subsequent amendments and project modifications shall minimally conform to the standards described in the California Code of Regulations, Title 20, Section 1704(b)(2), Appendix B(g)(2)(C). Survey methods, such as transect intervals and the use of subsurface prospection, shall be determined based on conditions in the amendment/modification area(s) and the characteristics of cultural resources in the vicinity of the amendment/modification(s).

Protocol: The project owner shall document the methods and results of cultural resources surveys in its petition to amend, following the content requirements described in the California Code of Regulations, Title 20, Sections 1769(a) and 1704(b)(2), Appendix B(g)(1). In addition, the project owner shall prepare a cultural resources technical report that describes the methods and results of new surveys, as described in the California Code of Regulations, Title 20, Section 1704(b)(2), Appendix B(g)(2)(C).

Verification: The project owner shall submit the information outlined above with its petition to amend. Staff will consider the submittals as part of the Post Certification Amendments and Changes process.

CULTURAL RESOURCES REPORT

DM-6 After construction is complete, the project owner shall submit the Cultural Resources Report (CRR) to the CPM for approval.

Protocol: The CRR shall report on all field activities including dates, times and locations, findings, samplings and analysis. All survey reports, DPR 523 forms and additional research reports not previously submitted to the California Historic Resource Information System (CHRIS) shall be included as an appendix to the CRR.

Verification: The project owner shall submit the subject CRR within 90 days after completion of ground disturbance (including landscaping). Within 10 days after CPM approval, the project owner shall provide documentation to the CPM that copies of the CRR have been provided to the curating institution (if archaeological materials were collected), the State Historic Preservation Officer, and the CHRIS.

3.4 Geologic Hazards and Resources

Construction of the two service connections will be designed in accordance with current building code and seismic requirements, and the facilities will be installed in areas already assessed for geologic hazards. Therefore, project implementation will not be susceptible to any geologic hazards greater than those previously analyzed by the CEC during licensing of the Project, and the conditions imposed in the 1994 Commission Decision are adequate to protect the environment with respect to geological resources.

Implementation of the Facility Design Conditions of Certification will facilitate compliance with applicable LORS. The Facility Design COCs require the use of a Designated Chief Building Official (FDGN-1 and FDGN-2), require SMUD to assign a registered civil/mechanical/electrical/engineer to the Project (FDGN-3 and FDGN-4, FDME-6 and FDME-7). SMUD will request the CEC Compliance Project Manager secure a Designated Chief Building Official for the project.

Hence, the Project modification(s) will comply with applicable LORS and will not require a change to any of the COCs.

3.5 Hazardous Materials Management

The construction of the two service connections will involve the use of hazardous material associated with normal construction activities, including diesel fuel, gasoline, lubricants/oils/grease, welding rods/wire, gasket sealer, rust inhibitor coatings, and construction debris. Due to the short duration of construction, it is unlikely that construction equipment/vehicle maintenance will be required at either work site. Therefore, the only significant construction hazardous material present during construction will be equipment/vehicle fuels (diesel and gasoline) and hydraulic fluid. In the unlikely event of a release, a spill containment kit will be available at the work sites to contain/clean up any releases. Construction impacts due to hazardous materials being present on site will be reduced through the implementation of the applicable COCs. The Applicant will implement the existing Safety Management Plan (HAZMAT-2), Emergency Preparedness Plan (HAZMAT-3), and weld inspection program (HAZMAT-7), updated as appropriate.

Once construction is complete, natural gas will be contained within both service connections, representing a potential risk to adjacent businesses and the public. This risk is reduced through the implementation of existing building codes and Hazardous Materials COC (HAZMAT-6).

The 1994 Commission Decision approving the SMUD Pipeline found the project to be in compliance with all applicable LORS (CEC, 1994). The modifications proposed to the Project are also consistent with all applicable LORS.

No changes are required to the existing COCs and no new hazardous materials management COCs are required.

3.6 Land Use

The Project vicinity is zoned heavy industrial (M-2S) by the City of Sacramento, surrounded by industrial uses, including the PGCP, Procter & Gamble, and Air Products facilities. The construction of the two natural gas connections will not result in any land use impacts beyond those analyzed in the 1994 Commission Decision. In addition, the Project will comply with applicable LORS, and will not require a change to any of the COCs.

3.7 Noise

Construction of the two service connections is expected to require 3 weeks and up to 7 pieces of construction equipment to complete. Construction will occur during the day between the hours of 7 am to 6 pm, Monday to Saturday, in compliance with Condition NOISE-3. Given the project vicinity's industrial nature, construction noise is not expected to result in significant noise impacts. The nearest residential or sensitive receptors are over ½ mile to the west, with substantial development between the construction site and the residence, attenuating potential noise impacts. Construction noise impacts will be further reduced by the implementation of the noise COCs (NOISE-1 to NOISE-4), which require publicly noticing construction, investigate, evaluate, and resolve noise complaints, restrict construction hours, and evaluate construction worker noise exposure levels to determine the necessary noise attenuation measures.

There will be no operational noise from the two service connections.

Therefore, the COC imposed in the 1994 Commission Decision on construction noise levels are adequate to protect the environment. The modification(s) to the Project will also comply with applicable LORS during construction and will not require any changes to the COCs.

3.8 Paleontological Resources

Service connection 1 will require an excavation between 18 and 48 inches deep by up to 18 inches in diameter on the PGCP site. Construction of the PGCP will likely encounter disturbed soils down to 48 inches in the area. As such, construction of service connection 1 is not expected to disturb native soils or paleontological resources.

Service connection 2 will require an excavation up to 10 feet wide by 12 feet deep pit and up to a 90 feet long trench (10 feet deep and up to 6 feet wide) within 83rd Street and the adjacent Air Products facility. The 83rd Street roadway includes a significant infrastructure including the SMUD Pipeline, City/County water and sanitary sewers, and natural gas pipelines. The installation of service connection 2 within the 83rd Street roadway will likely not impact native, undisturbed soils.

However, in the unlikely event that buried paleontological resources may be discovered during excavation of service connection 1 pipe rack footings or service connection 2 pipeline trench, Conditions of Certification GEOLOGY-1 through GEOLOGY-4 apply and will mitigate potentially adverse impacts. In conformance with these conditions, the project owner will submit the resume of a paleontological specialist that will be available should paleontological resources be discovered, secure an agreement (if necessary) to curate any discovered resources, require construction workers to undergo the worker environmental awareness program (WEAP) training, notify the CEC CPM in the event of a discovery, and curate discovered resources as applicable. Excavations of undisturbed soils are not planned during operations, and therefore no impacts to paleontological resources will occur during operations.

The 1994 Commission Decision approving the SMUD Cogeneration Pipeline Project found the project to be in compliance with all applicable LORS (CEC, 1994). The modifications proposed are consistent with all applicable LORS. Therefore, the COCs imposed in the 1994 Commission Decision are adequate to protect the environment with respect to paleontological resources. The Project will also comply with applicable LORS and would not require any changes to the COCs.

3.9 Public Health

Construction of the two service connections is expected to take 3 weeks and emit approximately 20 pounds of exhaust particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}).[2] Given the short duration of construction, the improvements in construction equipment since the SMUD

[2] See Appendix 3.1, Table 2.1 – 1.3541 lb PM10/day * 15 days = 20.3 pounds for the Project.

Pipeline was licensed, and the distance from the nearest sensitive/residential/worker receptors, the likelihood of the Project modification(s) resulting in a significant public health impact is unlikely. Furthermore, the Project modification(s) will comply with the SMAQMD's Best Management Practices to reduce construction particulate matter impacts to a less than significant level. Construction is expected to comply with applicable LORS and no changes to any COCs are proposed. Therefore, the public health impacts are not expected to be greater than those analyzed in the Commission Decision.

3.10 Socioeconomics

The installation of the two natural gas service connections will result in a small, positive impact due to investment in labor costs being expended in the Sacramento region. The small workforce and short construction duration will not result in any impacts to population, housing, employment patterns, community services (law enforcement, fire services, and parks and recreation. Additionally, no impact to environmental justice areas are expected. Therefore, no significant, negative socioeconomic impacts are expected due to construction.

No operational socioeconomic impacts are expected from the use of the two service connections. Both facilities currently use natural gas provided by the local utility and will continue to do so after completion of the proposed Project modification(s).

3.11 Soils

The proposed construction of the two service connections will not result in soils impacts beyond those analyzed in the 1994 Commission Decision. Construction will only expose soils in areas where the pipe trench or footings will be needed. Surrounding areas are already covered with asphalt or gravel, and implementation of Conditions of Certification SOIL-1 to SOIL-4, as necessary, prevent soil erosion. Construction will comply with all applicable LORS. There will be no impacts to soils from the operation of the two service connections. No changes to the COCs are required to address soils.

3.12 Transportation

Construction of service connection 1 will not result in any transportation impacts as all construction will occur on the PGCP site, with construction taking only a few days. Material deliveries required for this project change can be completed in one to two truck deliveries.

Construction of service connection 2 will require 3 weeks to complete and will require closure of 83rd Street, necessitating a detour route be developed. The road closure will likely affect 6 businesses that use 83rd Street and Power Ridge Road. The detour will likely route vehicles onto 84th Street to 24th Avenue to avoid the road closure. The project owner will work with the City of Sacramento to minimize impacts to these businesses and the public. Material Deliveries for the Project modification(s) can be completed in approximately 34 truckloads over the 3-week construction period.

Implementation of the existing Conditions of Certification (TRANS-1 to TRANS-8), as applicable, will further reduce any potential transportation impacts associated with the Project modification(s). Given the short duration of the road closure, the availability of detour route, and existing Conditions of Certification, transportation impacts are expected to be less than significant. Furthermore, construction of these two service connections are expected to comply with applicable LORS without needing to modify existing or propose new COCs. Therefore, the conclusions reached in the Commission Decision are still applicable.

3.13 Visual Resources

The proposed modifications will not result in any visual impacts from construction of the two service connections beyond those analyzed in the 1994 Commission Decision. The addition of the underground natural gas piping will not be a significant change to the industrial nature of the area and will not be visible. Consequently, the Project will not cause any visual resources impacts greater than those

previously analyzed by the CEC during licensing (CEC, 1994). In addition, the Project will comply with applicable LORS and will not require a change to any of the COCs.

3.14 Waste Management

The installation of the new service connections will not significantly affect waste management because the construction work will be minor and construction waste materials will be disposed of as required by current LORS as well as the COCs. Any waste products resulting from construction will be handled as required by current LORS and impacts from the construction of the Project will not exceed those analyzed in the 1994 Commission Decision. Therefore, the Project will comply with applicable LORS and will not require any changes to the COCs.

3.15 Water Resources

The construction of the proposed service connections is expected to require up to 200 gallons of water. This water will be used for hydrotesting the new service connection's piping. Hydrotest water will be collected and returned to the project owner's corporate offices for disposal in accordance with applicable LORS.

Additional water will be required for dust suppression. However, since construction is scheduled to occur during the January and February, considered the rainy season, significant quantities of fugitive dust suppression water is not expected to be needed.

Water resources will be protected by implementing Conditions of Certification WATER-1 to WATER-4, and by installing BMPs as necessary. Impacts to water resources are expected to be less than significant due to the construction of these two service connections.

No operational impacts are expected to water resources as the two service connections do not require water use nor will they discharge water.

3.16 Worker Safety and Health

During the construction of the two service connections, safe work practices will be followed to reduce the potential of recordable work incidents. Due to the small construction workforce, construction of the proposed modifications will not create any worker safety and health impacts for either the construction or operation of the Project modification(s) beyond those analyzed in the 1994 Commission Decision. Therefore, the Project will comply with applicable LORS and will not require any changes to the COCs.

3.17 Energy

The construction of the two service connections will consume energy in the form of vehicle fuel. This fuel consumption is not wasteful as it will allow the continued operation of two industrial facilities that contribute to the overall economic health of the Sacramento region. Based on the minimum number of construction workers, construction equipment, and the short construction window, the expected energy consumption during construction will be insignificant relative to the regional energy use. Therefore, energy impacts due to construction of the Project modification(s) are expected to be less than significant.

No operational impacts are expected as the existing facilities already use natural gas and the proposed service connections will not increase the volume of fuel supplied to either facility.

3.18 Wildfires

Both service connections are located in highly urbanized areas with a low potential for wildfires. Furthermore, the construction sites are both supported by the City of Sacramento fire water system and the nearest fire station is located less than a mile away (City of Sacramento Fire Station 99 located at

5801 Florin Perkins Road, Sacramento, CA). Therefore, the potential impacts due to wildfires is less than significant.

No operational wildfire impacts are expected as the two facilities receiving the natural gas already use natural gas and the new service connection will not increase the wildfire risk.

4. Potential Effects on the Public

In accordance with CEC Siting Regulations (Title 20, CCR, Section 1769(a)(1)(G)), this section discusses the potential effects on the public that may result from the modifications proposed in this PTA.

With the implementation of the modifications proposed, the installation of the two new service connections would have no adverse effect on the public. As previously mentioned, the construction activity associated with the proposed modification would be of short duration and minor in scope, resulting in minimal disturbance to traffic flow. The other associated impacts to the environment would be less than significant.

5. List of Property Owners

Consistent with the CEC Siting Regulations Section 1769(a)(1)(H), a list of property owners adjacent or near the proposed project is provided under a separate cover.

6. Potential Effects on Property Owners, the Public, and Parties in the Proceeding

This section addresses potential effects of the Project modifications proposed in this PTA on nearby property owners, the public, and parties in the application proceeding, in accordance with CEC Siting Regulations (Title 20, CCR, Section 1769 (a)(1)(I)).

The proposed modifications' effects on adjacent land owners would not differ significantly compared with the Project as previously certified and amended. As previously mentioned, the construction activity associated with the proposed modification would be short-term (only 3 weeks) and use a small construction crew; thus, disturbance of normal traffic flow in the project vicinity would be minimal and the associated impacts to the environment would be less than significant.

7. References

California Energy Commission (CEC). 1994. Commission Decision, Application for Certification of the Sacramento Municipal Utility District Cogeneration Pipeline Project (92-AFC-02PC). May 11.

California Energy Commission (CEC). 2015. Staff Analysis of Amendment Proposal, Sacramento Cogeneration Authority (93-AFC-2C). June 3.

California Air Pollution Officers Association (CAPCOA), 2016. California Emission Estimator Model (CALEEMOD) Version 2016.3.2. City of Sacramento. 2015. 2035 General Plan. March 3. Available online at: http://www.cityofsacramento.org/Community-Development/Planning/Long-Range/General-Plan/General-Plan-Update

Sacramento Metropolitan Air Quality Management District. 2019. CEQA Guide to Air Quality Assessment in Sacramento County. July.

Appendix 3.1
California Emission Estimator Model Output Files

SMUD Cogen Pipeline

Sacramento Metropolitan AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	5.00	1000sqft	0.11	5,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2020
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Project will last for 3 weeks

Off-road Equipment - project specific data

Trips and VMT - project specific data

Grading - project specific data.

Vehicle Trips - project specific

Consumer Products - No operation emissions

Area Coating -

Energy Use - No operational emissions

Water And Wastewater - No Operaitonal Emissions

Solid Waste - No Operation

SMUD Cogen Pipeline - Sacramento Metropolitan AQMD Air District, Winter

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	1.00	15.00
tblEnergyUse	LightingElect	4.57	0.00
tblEnergyUse	NT24E	7.20	0.00
tblEnergyUse	NT24NG	12.42	0.00
tblEnergyUse	T24E	3.41	0.00
tblEnergyUse	T24NG	23.39	0.00
tblGrading	AcresOfGrading	7.50	0.10
tblGrading	MaterialExported	0.00	470.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblSolidWaste	SolidWasteGenerationRate	6.20	0.00
tblTripsAndVMT	HaulingTripLength	20.00	40.00
tblTripsAndVMT	HaulingTripNumber	46.00	555.00
tblTripsAndVMT	WorkerTripLength	10.00	30.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblWater	AnaDigestCogenCombDigestGasPercent	85.00	100.00
tblWater	AnaDigestCombDigestGasPercent	15.00	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	2,117.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	1,156,250.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	3.6623	49.1704	25.2983	0.1094	1.7497	1.3541	3.1038	0.4737	1.2492	1.7229	0.0000	11,158.6745	11,158.6745	1.8926	0.0000	11,205.9884
Maximum	**3.6623**	**49.1704**	**25.2983**	**0.1094**	**1.7497**	**1.3541**	**3.1038**	**0.4737**	**1.2492**	**1.7229**	**0.0000**	**11,158.6745**	**11,158.6745**	**1.8926**	**0.0000**	**11,205.9884**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	3.6623	49.1704	25.2983	0.1094	1.7497	1.3541	3.1038	0.4737	1.2492	1.7229	0.0000	11,158.6745	11,158.6745	1.8926	0.0000	11,205.9884
Maximum	**3.6623**	**49.1704**	**25.2983**	**0.1094**	**1.7497**	**1.3541**	**3.1038**	**0.4737**	**1.2492**	**1.7229**	**0.0000**	**11,158.6745**	**11,158.6745**	**1.8926**	**0.0000**	**11,205.9884**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1071	0.0000	5.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.0900e-003	1.0900e-003	0.0000		1.1700e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1071**	**0.0000**	**5.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**1.0900e-003**	**1.0900e-003**	**0.0000**	**0.0000**	**1.1700e-003**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1071	0.0000	5.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.0900e-003	1.0900e-003	0.0000		1.1700e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1071**	**0.0000**	**5.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**1.0900e-003**	**1.0900e-003**	**0.0000**	**0.0000**	**1.1700e-003**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	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	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Pipeline Project	Site Preparation	1/6/2020	1/26/2020	5	15	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline Project	Cranes	1	8.00	231	0.29
Pipeline Project	Excavators	1	8.00	158	0.38
Pipeline Project	Graders	1	8.00	187	0.41
Pipeline Project	Off-Highway Trucks	2	8.00	402	0.38
Pipeline Project	Plate Compactors	1	8.00	8	0.43
Pipeline Project	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Pipeline Project	8	20.00	0.00	555.00	30.00	6.50	40.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Pipeline Project - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0700e-003	0.0000	7.0700e-003	7.6000e-004	0.0000	7.6000e-004			0.0000			0.0000
Off-Road	2.9595	31.2368	19.5877	0.0507		1.2781	1.2781		1.1766	1.1766		4,894.8871	4,894.8871	1.5755		4,934.2755
Total	**2.9595**	**31.2368**	**19.5877**	**0.0507**	**7.0700e-003**	**1.2781**	**1.2852**	**7.6000e-004**	**1.1766**	**1.1774**		**4,894.8871**	**4,894.8871**	**1.5755**		**4,934.2755**

3.2 Pipeline Project - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5031	17.7805	4.3022	0.0546	1.2866	0.0731	1.3597	0.3521	0.0699	0.4220		5,854.6349	5,854.6349	0.3063		5,862.2933
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1996	0.1531	1.4085	4.1100e-003	0.4560	2.9200e-003	0.4589	0.1209	2.6900e-003	0.1236		409.1525	409.1525	0.0107		409.4196
Total	**0.7027**	**17.9336**	**5.7106**	**0.0587**	**1.7426**	**0.0760**	**1.8186**	**0.4730**	**0.0726**	**0.5456**		**6,263.7874**	**6,263.7874**	**0.3170**		**6,271.7129**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0700e-003	0.0000	7.0700e-003	7.6000e-004	0.0000	7.6000e-004			0.0000			0.0000
Off-Road	2.9595	31.2368	19.5877	0.0507		1.2781	1.2781		1.1766	1.1766	0.0000	4,894.8871	4,894.8871	1.5755		4,934.2755
Total	**2.9595**	**31.2368**	**19.5877**	**0.0507**	**7.0700e-003**	**1.2781**	**1.2852**	**7.6000e-004**	**1.1766**	**1.1774**	**0.0000**	**4,894.8871**	**4,894.8871**	**1.5755**		**4,934.2755**

3.2 Pipeline Project - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5031	17.7805	4.3022	0.0546	1.2866	0.0731	1.3597	0.3521	0.0699	0.4220		5,854.6349	5,854.6349	0.3063		5,862.2933
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1996	0.1531	1.4085	4.1100e-003	0.4560	2.9200e-003	0.4589	0.1209	2.6900e-003	0.1236		409.1525	409.1525	0.0107		409.4196
Total	**0.7027**	**17.9336**	**5.7106**	**0.0587**	**1.7426**	**0.0760**	**1.8186**	**0.4730**	**0.0726**	**0.5456**		**6,263.7874**	**6,263.7874**	**0.3170**		**6,271.7129**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	10.00	5.00	6.50	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.551662	0.040953	0.203778	0.123762	0.021802	0.005583	0.018466	0.022043	0.002076	0.002280	0.006004	0.000618	0.000971

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1071	0.0000	5.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.0900e-003	1.0900e-003	0.0000		1.1700e-003
Unmitigated	0.1071	0.0000	5.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.0900e-003	1.0900e-003	0.0000		1.1700e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1070					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0000e-005	0.0000	5.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.0900e-003	1.0900e-003	0.0000		1.1700e-003
Total	**0.1071**	**0.0000**	**5.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.0900e-003**	**1.0900e-003**	**0.0000**		**1.1700e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1070					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0000e-005	0.0000	5.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.0900e-003	1.0900e-003	0.0000		1.1700e-003
Total	**0.1071**	**0.0000**	**5.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.0900e-003**	**1.0900e-003**	**0.0000**		**1.1700e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

SMUD Cogen Pipeline

Sacramento Metropolitan AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	5.00	1000sqft	0.11	5,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2020
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Project will last for 3 weeks

Off-road Equipment - project specific data

Trips and VMT - project specific data

Grading - project specific data.

Vehicle Trips - project specific

Consumer Products - No operation emissions

Area Coating -

Energy Use - No operational emissions

Water And Wastewater - No Operaitonal Emissions

Solid Waste - No Operation

SMUD Cogen Pipeline - Sacramento Metropolitan AQMD Air District, Annual

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	1.00	15.00
tblEnergyUse	LightingElect	4.57	0.00
tblEnergyUse	NT24E	7.20	0.00
tblEnergyUse	NT24NG	12.42	0.00
tblEnergyUse	T24E	3.41	0.00
tblEnergyUse	T24NG	23.39	0.00
tblGrading	AcresOfGrading	7.50	0.10
tblGrading	MaterialExported	0.00	470.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblSolidWaste	SolidWasteGenerationRate	6.20	0.00
tblTripsAndVMT	HaulingTripLength	20.00	40.00
tblTripsAndVMT	HaulingTripNumber	46.00	555.00
tblTripsAndVMT	WorkerTripLength	10.00	30.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblWater	AnaDigestCogenCombDigestGasPercent	85.00	100.00
tblWater	AnaDigestCombDigestGasPercent	15.00	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	2,117.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	1,156,250.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0273	0.3672	0.1894	8.2000e-004	0.0127	0.0102	0.0229	3.4500e-003	9.3600e-003	0.0128	0.0000	76.1956	76.1956	0.0129	0.0000	76.5167
Maximum	**0.0273**	**0.3672**	**0.1894**	**8.2000e-004**	**0.0127**	**0.0102**	**0.0229**	**3.4500e-003**	**9.3600e-003**	**0.0128**	**0.0000**	**76.1956**	**76.1956**	**0.0129**	**0.0000**	**76.5167**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0273	0.3672	0.1894	8.2000e-004	0.0127	0.0102	0.0229	3.4500e-003	9.3600e-003	0.0128	0.0000	76.1955	76.1955	0.0129	0.0000	76.5167
Maximum	**0.0273**	**0.3672**	**0.1894**	**8.2000e-004**	**0.0127**	**0.0102**	**0.0229**	**3.4500e-003**	**9.3600e-003**	**0.0128**	**0.0000**	**76.1955**	**76.1955**	**0.0129**	**0.0000**	**76.5167**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-6-2020	4-5-2020	0.3962	0.3962
		Highest	0.3962	0.3962

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0195	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2000e-004	1.2000e-004	0.0000	0.0000	1.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0195**	**0.0000**	**6.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.2000e-004**	**1.2000e-004**	**0.0000**	**0.0000**	**1.3000e-004**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0195	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2000e-004	1.2000e-004	0.0000	0.0000	1.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0195**	**0.0000**	**6.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.2000e-004**	**1.2000e-004**	**0.0000**	**0.0000**	**1.3000e-004**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Pipeline Project	Site Preparation	1/6/2020	1/26/2020	5	15	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline Project	Cranes	1	8.00	231	0.29
Pipeline Project	Excavators	1	8.00	158	0.38
Pipeline Project	Graders	1	8.00	187	0.41
Pipeline Project	Off-Highway Trucks	2	8.00	402	0.38
Pipeline Project	Plate Compactors	1	8.00	8	0.43
Pipeline Project	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Pipeline Project	8	20.00	0.00	555.00	30.00	6.50	40.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Pipeline Project - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0222	0.2343	0.1469	3.8000e-004		9.5900e-003	9.5900e-003		8.8200e-003	8.8200e-003	0.0000	33.3043	33.3043	0.0107	0.0000	33.5723
Total	**0.0222**	**0.2343**	**0.1469**	**3.8000e-004**	**5.0000e-005**	**9.5900e-003**	**9.6400e-003**	**1.0000e-005**	**8.8200e-003**	**8.8300e-003**	**0.0000**	**33.3043**	**33.3043**	**0.0107**	**0.0000**	**33.5723**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.7300e-003	0.1319	0.0316	4.1000e-004	9.3600e-003	5.4000e-004	9.9000e-003	2.5700e-003	5.2000e-004	3.0900e-003	0.0000	40.0246	40.0246	2.0500e-003	0.0000	40.0759
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3400e-003	1.0300e-003	0.0108	3.0000e-005	3.3000e-003	2.0000e-005	3.3200e-003	8.8000e-004	2.0000e-005	9.0000e-004	0.0000	2.8667	2.8667	8.0000e-005	0.0000	2.8685
Total	**5.0700e-003**	**0.1329**	**0.0425**	**4.4000e-004**	**0.0127**	**5.6000e-004**	**0.0132**	**3.4500e-003**	**5.4000e-004**	**3.9900e-003**	**0.0000**	**42.8913**	**42.8913**	**2.1300e-003**	**0.0000**	**42.9445**

3.2 Pipeline Project - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0222	0.2343	0.1469	3.8000e-004		9.5900e-003	9.5900e-003		8.8200e-003	8.8200e-003	0.0000	33.3042	33.3042	0.0107	0.0000	33.5722
Total	**0.0222**	**0.2343**	**0.1469**	**3.8000e-004**	**5.0000e-005**	**9.5900e-003**	**9.6400e-003**	**1.0000e-005**	**8.8200e-003**	**8.8300e-003**	**0.0000**	**33.3042**	**33.3042**	**0.0107**	**0.0000**	**33.5722**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.7300e-003	0.1319	0.0316	4.1000e-004	9.3600e-003	5.4000e-004	9.9000e-003	2.5700e-003	5.2000e-004	3.0900e-003	0.0000	40.0246	40.0246	2.0500e-003	0.0000	40.0759
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3400e-003	1.0300e-003	0.0108	3.0000e-005	3.3000e-003	2.0000e-005	3.3200e-003	8.8000e-004	2.0000e-005	9.0000e-004	0.0000	2.8667	2.8667	8.0000e-005	0.0000	2.8685
Total	**5.0700e-003**	**0.1329**	**0.0425**	**4.4000e-004**	**0.0127**	**5.6000e-004**	**0.0132**	**3.4500e-003**	**5.4000e-004**	**3.9900e-003**	**0.0000**	**42.8913**	**42.8913**	**2.1300e-003**	**0.0000**	**42.9445**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	10.00	5.00	6.50	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.551662	0.040953	0.203778	0.123762	0.021802	0.005583	0.018466	0.022043	0.002076	0.002280	0.006004	0.000618	0.000971

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0195	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2000e-004	1.2000e-004	0.0000	0.0000	1.3000e-004
Unmitigated	0.0195	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2000e-004	1.2000e-004	0.0000	0.0000	1.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0195					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2000e-004	1.2000e-004	0.0000	0.0000	1.3000e-004
Total	**0.0195**	**0.0000**	**6.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.2000e-004**	**1.2000e-004**	**0.0000**	**0.0000**	**1.3000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0195					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2000e-004	1.2000e-004	0.0000	0.0000	1.3000e-004
Total	**0.0195**	**0.0000**	**6.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.2000e-004**	**1.2000e-004**	**0.0000**	**0.0000**	**1.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation