

APPENDIX A

- A-1 Pre-Construction Mitigation Measures**
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APPENDIX A
CARSON TO NORWALK PROJECT EIR
MITIGATION MEASURES and APPLICANT-PROPOSED MEASURES

This Appendix includes all applicable mitigation measures from the Final EIR, as well as all Applicant-Proposed Measures and project parameters from those documents. For each construction mitigation measure, the following information is included:

- Brief description of the impact that was identified
- Full text of the mitigation measure
- Detailed performance criteria describing how it can be ensured that the measure has been implemented and suggested violation level
- Timing of the measure's implementation
- Effectiveness criteria, describing how it can be determined whether the measure resulted in the anticipated impact reduction
- Timing of effectiveness (i.e., when can it be determined whether the measure was effective or not?)
- Description of what is considered a violation for each aspect of the measure or parameter.

If there is a conflict between Mitigation Measures and Applicant-Proposed Measures, generally the stricter measure shall be used. If there is a conflict, the CPUC designees (Lead Environmental Monitor in consultation with the Program Manager) will make a determination on a case-by-case basis.

The mitigation measures from the FEIR are divided into four categories:

- Appendix A-1 Pre-Construction Measures
- Appendix A-2 Construction Measures
- Appendix A-3 Pre-Operation/Operation Measures
- Appendix A-4 Project Parameters

Project parameters are aspects of the project description (for both construction and operation) that SFPP presented in its application, and upon which impact analyses were based. The construction of the Carson to Norwalk Pipeline project in accordance with those parameters will be monitored along with the implementation of the mitigation measures themselves.

Performance criteria are presented in Appendix A-2 only, since those measures are implemented in the field and compliance criteria need to be clearly defined. For these measures, violation levels are also presented. Violation levels are defined as follows:

Acceptable: Activities comply with performance criteria set for all applicable mitigation measures, applicant-proposed measures, permit requirements or conditions, approved plans, or other project stipulations.

Non-Compliance: Any deviation from applicable mitigation measures, applicant-proposed measures and project parameters, permit conditions or requirements, and approved plans. Non-compliance levels are as follows (see also Implementation Plan Section 6.9):

Level 1 One of the performance criteria has not been complied with resulting in only partial implementation of a Mitigation Measure, but no significant impact.

A written warning shall be submitted to SFPP's Environmental Coordinator (or assigned designee) and corrective action shall be required within a stated maximum period (24 hrs to 3

days, to be determined by the LEM or CPUC Project Manager).

If corrective action is not taken within the stated period, a second written notice will inform SFPP that unless the situation is rectified, a cessation of all construction activities will be required within 24 hours. Construction activities may be shut down until SFPP satisfies the CPUC Project Manager (or MMCRP Program Management Team, as designated) that the situation has been remedied.

Level 2 One or more of the performance criteria have not been complied with, making the mitigation ineffective and resulting in minor impacts. If allowed to continue, this non-compliance could result in a significant impact over time.

An oral warning followed by a written notice shall be submitted to SFPP=s Environmental Coordinator (or assigned designee). Corrective action shall begin by the next construction day.

If corrective action is not begun by the next construction day, a cessation of all construction activities may be required. Construction activities may be shut down until SFPP satisfies the CPUC Project Manager (or MMCRP Program Management Team, as designated) that the situation has been remedied.

Level 3 One or more of the performance criteria are not complied with and the implementation of a mitigation measure is deficient or non-existent, resulting in significant impact(s), or there is immediate threat of major, irreversible environmental damage or property loss.

An oral warning followed by written notice shall be submitted to SFPP=s Environmental Coordinator (or assigned designee). Correction action shall begin immediately.

Construction activities for the entire construction spread may be shut down until SFPP satisfies the CPUC, the CPUC Project Manager, and other involved agencies/parties that the situation has been remedied.

A pattern of repeated Level 1 or Level 2 non-compliances may also be reason to shut down construction activities until SFPP satisfies the CPUC and the CPUC designee (Program Manager), that the situation has been remedied. For construction-related mitigation measures, non-compliance levels are included for each performance criterion.

APPENDIX A-1

PRE-CONSTRUCTION MEASURES

A-1 PRE-CONSTRUCTION MITIGATION MEASURES

Pre-Construction Mitigation Measures do not have Performance Criteria, since approval of pre-construction measures is based on technical review of documents submitted by SFPP. Some of the following measures also appear in Appendix A-2 (Construction Measures) since components of the measures occur during project construction.

Environmental Contamination

EC-1 SFPP shall re-evaluate low potential sites if construction parameters vary in the following ways: trench depth exceeds planned depth of seven feet and will potentially encounter contaminated groundwater or the location of the trench is re-located out of the public right-of-way (where trenching could occur in a “low” potential site). If these conditions are met, SFPP shall reevaluate all "low" potential sites to determine whether they need to be reclassified as medium or high impact potential sites. A qualified and approved environmental consultant (California registered geologist or civil engineer experienced in environmental assessments acceptable to CPUC) shall perform the review and evaluation, and the results shall be reviewed and approved by the appropriate Los Angeles County Environmental Protection Division or DTSC prior to construction. A copy of the DTSC or Los Angeles County Environmental Protection Division approval letter must be provided to the CPUC prior to start of construction (this measure is also listed as a “during construction measure”).

EC-2 Thoroughly review current agency records followed by site-specific visual inspection of the pipeline route by a qualified and approved environmental consultant for "medium" potential sites (as labeled in Table C.5-3). Record review shall identify data confirming no off-site contamination extending to the pipeline route, adequate remediation of the pipeline route or agency certified closure of the site. Visual inspection should be completed for the unpaved portions of the route; in these locations, investigations of the shallow subsurface (with the aid of a spade or probe) should verify no evidence of off-site discharge, surface stains or unauthorized dumping. If results of the record review or visual inspection that indicate contamination is present in the pipeline route shall cause medium potential sites to be treated as high potential.

Medium potential sites include numerous facilities with leaking underground fuel tanks and pipelines at service stations and auto repair shops. Record review of these potential sites must determine that the horizontal limits of soil contamination do not extend near the proposed trench area. Where the limits of contamination are uncertain, a soil vapor survey or soil sampling should be conducted along the affected length of the proposed trench. Laboratory test results from these site investigations should be reported to DTSC or the Los Angeles County Environmental Protection Division and include an assessment of the contamination potential in the trench area. A copy of the DTSC or Los Angeles County Environmental Protection Division approval letter must be provided to the CPUC prior to start of construction.

The proposed route passes near the Long Beach City Landfill at Paramount Boulevard and South Street. To assess the possibility that contamination from this site could affect the pipeline construction zone, a record search shall be completed to determine whether contamination could extend into the proposed trench. If records cannot confirm a gas-free landfill perimeter adjacent to the project, a soil vapor survey consisting of driving probes every 25 to 50 feet along the affected trench line should be conducted. Vapor samples should be tested for methane, other flammable gases and volatile organic compounds. Laboratory test results should be reported to DTSC or the Los Angeles County Environmental Protection Division and include an assessment of the contamination potential in the trench area. A copy of the DTSC or Los Angeles County Environmental Protection Division approval letter must be provided to the CPUC prior to start of construction.

EC-3 Review current agency records of "high" potential sites (as labeled in Table C.5-3) to design an investigation program to assess surface waste or debris and underlying soil. The review shall be performed by a qualified and approved environmental consultant. Results shall be reviewed and approved by the Los Angeles County Environmental Protection Division or DTSC prior to construction. A copy of the DTSC or Los Angeles County Environmental Protection Division approval letter must be provided to the CPUC prior to start of construction. If records review demonstrates that contamination from “high” sites does not extend off-site,

or if remediation has been completed, and/or the agency has issued a case closed status, the site may be downgraded to a “low” potential site.

If the records review does not eliminate the possibility that contamination could extend off-site, an investigation shall be performed. The investigation shall include collecting samples for laboratory analysis and quantification of contaminant levels within the proposed excavation and surface disturbance areas. Subsurface investigation for high potential sites shall determine appropriate worker protection and hazardous material handling and disposal procedures appropriate for the subject site.

Areas with contaminated soil determined to be hazardous waste shall be excavated by personnel who have been trained through the OSHA recommended 40-hour safety program (29CFR1910.120) with an approved plan for excavation, control of contaminant releases to the air and off-site transport or on-site treatment. Health and safety plans, prepared by a qualified and approved industrial hygienist, shall be developed to protect the general public and all workers in the construction area.

- EC-4 The Norwalk Station, or DFSP Norwalk, is ranked as having high potential to impact the project due to contamination of soil and groundwater by jet fuels (JP-4 and JP-5), gasoline, diesel, and buried hydrocarbon wastes. A subsurface investigation combining soil vapor and soil sampling should be undertaken along the proposed pipeline route and in any other areas where ground disturbance would result from modifications at this station. Sampling probes should be driving at intervals of 25 feet (horizontal spacing) to collect soil and vapor samples throughout the trench depth. Samples should be tested for all ranges of petroleum hydrocarbons, MTBE, 1,2-DCA and other volatile organic compounds. Vapor testing at mid-trench and full-trench depth is required to adequately determine the presence of vapor within the trench to assess potential exposure to workers and the public. Laboratory test results should be reported to DTSC or the Los Angeles County Environmental Protection Division and include an assessment of the contamination potential in the trench area. A copy of the DTSC or Los Angeles County Environmental Protection Division approval letter must be provided to the CPUC prior to start of construction.
- EC-5 SFPP shall perform contaminated site records searches for the Watson Station (City of Carson), Industry Station, and Colton Terminal, and provide search results to the DTSC and the CPUC. If no contamination is recorded at any of the three stations, then only Mitigation Measure EC-6 shall apply to construction within or adjacent to stations. If any station includes recorded contamination, the site shall be ranked as having high, medium, or low potential for impact, and Mitigation Measures EC-1 through EC-3 shall apply, as appropriate. A letter or report shall be submitted to the DTSC and CPUC prior to the start of construction, documenting compliance with this measure.
- EC-7 Prior to trench excavation and pipeline construction, the Applicant shall contact the California Department of Conservation, Division of Oil, Gas and Geothermal Resources for specific information on wells located in or near the pipeline route, including location and abandonment details. The Applicant shall make a diligent effort to avoid construction over abandoned oil wells. If the pipeline is located over or near (i.e., within 50 feet of the pipeline route) a plugged or abandoned well, or if an unrecorded well is encountered during construction, the Applicant shall coordinate with the Division of Oil, Gas and Geothermal Resources to ensure that the well is flagged for avoidance, correctly abandoned, and does not require remedial plugging or the installation of a gas venting system.
- EC-8 If qualified treatment facilities are impacted, the project proponent shall utilize portable on-site treatment units or in-situ treatment prior to construction in order to greatly reduce transport- and treatment-related cumulative impacts. Applicable technologies such as chemical stabilization and fixation, thermal combustion, vapor extraction or bioremediation can be selected based on site specific conditions.
- EC-9* If construction parameters (trench location and/or depth) are changed, SFPP will review and re-evaluate the database records and site rankings. A qualified professional (California registered geologist, registered environmental assessor, or civil engineer experienced in environmental assessments) will perform the review (this measure is also listed as a “during construction measure”).

EC-10* SFPP will conduct a reconnaissance of the proposed and alternate pipeline alignments to provide additional information and visual confirmation for those sites identified as a high or medium potential impact sites in Table C.5-3. The results of the reconnaissance, combined with the results of this contamination pre-screening process, will provide information necessary to better evaluate those areas that may require additional evaluation. Some sites identified as medium risk sites during the contamination pre-screening process may be downgraded to low risk sites after the reconnaissance and, therefore, may not require additional evaluation. Additional evaluation would include regulatory agency records review for specific sites. The records review will attempt to identify data indicating no offsite contamination of the pipeline route, adequate site remediation or agency-certified closure of the site. Sites for which this information is obtained, will be downgraded to low potential impact sites.

EC-11* A general contingency plan will be developed for sites which remain as high or medium potential impact sites following the site reconnaissance and records review. The contingency plan should be prepared prior to commencement of alignment construction, to avoid any unnecessary delays in the event that contamination is encountered. The contingency plan would identify specific measures, precautions and alternatives for action to be taken if/when contaminated soils or vapors are encountered in the pipeline route. The plan will specify procedures for monitoring, identifying, handling and disposing of hazardous materials/waste. The contingency plan will include a health and safety plan, reviewed and signed by a certified industrial hygienist (CIH), specifying site monitoring guidelines and action levels, as well as personal protective equipment.

EC-12* Once the presence of contamination is confirmed, SFPP will develop a specific contingency plan. The specific contingency plan should identify the regulatory agencies to notify, the appropriate environmental permits that may be required, the names of qualified hazardous waste haulers, and the locations of appropriate treatment/disposal facilities. Some additional items to be included in the plan would be:

- A listing of known contaminants and contaminant levels
- Agency notification requirements
- Monitoring requirements
- Agency participation requirements
- Public notification requirements
- Personal protective equipment and Health and Safety requirements.

Areas with contaminated soil determined to be hazardous will be excavated by personnel who have been trained through the OSHA recommended, 40-hour safety program (29 CFR 1910.120) with an approved plan for excavation, control of contaminant releases to the air and offsite transport. Health and safety plans, reviewed and signed by a CIH, will be developed to protect the general public and workers in the construction zone.

If the agency record review indicates the potential of toxic or explosive gases (i.e. benzene, vinyl chloride, methane) emanating from the Long Beach City Landfill, a qualified environmental professional will conduct a soil vapor survey along the Proposed Project pipeline route immediately adjacent to the landfill. Where potentially hazardous levels of gas are identified, mitigation by aeration and gas monitoring will be performed during construction.

Geology and Soils

G-1 Based on existing information, SFPP shall prepare a report documenting the location, orientation and direction of anticipated offset for the Newport-Inglewood fault. Based on this information, SFPP shall develop and justify design elements for the fault crossing, including consideration of vibration sensors, thicker-walled pipe, consideration of additional block valves, or other items. SFPP shall submit this report to the State Fire Marshal, the CPUC, and the Los Angeles County Public Works Department for review and approval prior to finalizing construction plans.

G-2 SFPP shall conduct geotechnical investigations in the areas classified as having moderate to high

liquefaction potential and areas of potential differential settlement during final design of the proposed project. In addition, SFPP shall request information from local jurisdictions on the specific locations of perched aquifers. If these locations or classifications are confirmed by geotechnical analyses, then site-specific mitigation should be implemented. Techniques considered shall include the following:

Buried pipelines crossings areas of liquefiable soils will either be located below, within, or above the zone of liquefiable soil.

Burial of the pipeline within the liquefiable layer often results in uplift forces on the pipeline. The impact of uplift on the pipeline can be mitigated through the use of densification techniques, such as stone columns, vertical anchors (tension piles), or by use of thick-walled, ductile steel pipe.

Additional block valves to isolate the liquefiable area.

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Additional block valves to isolate the liquefiable area.

- G-3* Increasing the pipe wall thickness, as necessary, to withstand greater stress from ground movement.
 - G-4* Complying with pipeline design and construction codes and specifications.
 - G-5* Designing aboveground structures to withstand the predicted level of ground shaking as well as site-specific foundation conditions.
 - G-6* Placing the pipe below liquefiable materials.
 - G-7* Installing a cathodic protection system to prevent corrosion.
 - G-8* Installing shutoff valves beyond the limits of potential lateral spreading.
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Hydrology and Water Resources

H-1 During final pipeline design, SFPP shall attempt to ensure that the pipeline is located at least 200 feet from any existing water well. Depending on the geology of any particular location, a greater separation or special pipeline design features (e.g., use of thicker walled pipe to further protect against third-party damage) may be required. In addition, in accordance with California Government Code Sections 51017.1 and 51017.2, if the pipeline is located within 1,000 feet of a public drinking water well, SFPP shall prepare a Pipeline Wellhead Protection Plan that describes SFPP's efforts to ensure pipeline integrity and response measures. A report on water wells, providing the information required in this measure, shall be submitted to the State Fire Marshal and the CPUC for review and approval prior to the start of construction.

H-2 At the open-cut crossing of Compton Creek, the pipeline shall be buried at a depth of not less than 4 feet below the maximum depth of scour for a 24-hour flood, or 1.3 times the same depth of scour, whichever is greater. This depth shall be greater than the depth of the burial of the toe down of the levee walls. The Capital Flood discharge (50-year design frequency) shall be used to estimate scour. The scour depth shall be estimated by a registered Civil Engineer with experience in river sediment transport, using methods acceptable to the CPUC and U.S. Army Corps of Engineers. Compliance with this measure must be documented in an engineering report to be submitted to the CPUC and the State Fire Marshal for review and approval prior to completion of construction plans.

H-3 SFPP shall use a thicker walled pipe (wall thickness of at least 0.500 inches) or concrete coated pipe at the Compton Creek crossing (if this crossing is not bored) in order to protect the pipe from external damage. Such pipe and/or coating shall extend at least 10 feet outside of the levee walls, or within 5 feet of the valves on either side of the crossing. The proposed protection mechanism shall be shown on construction plans and approved by the State Fire Marshal and CPUC prior to the start of construction.

Land Use and Recreation

L-1 The Applicant shall give ample advance notice (at least 14 days) to potentially affected property owners and tenants prior to construction of the pipeline. Notice shall be provided by: 1) mailing notices to properties within 300 feet of the ROW; 2) posting bulletins in neighborhoods that could be affected; and 3) placing notices in local newspapers (this measure is also listed as a “during construction measure”).

L-2 The Applicant shall notify residents at least two weeks in advance of lane closures where access to residential areas may be restricted, and develop alternative transportation routes. SFPP shall restore restricted vehicle access to residential areas and individual homes at the end of each work day, while maintaining access controls necessary to preserve public safety in accordance with approved Traffic Control Plans (this measure is also listed as a “during construction measure”).

L-3 The Applicant shall use a public liaison/contact person before, during, and after construction through residential areas as the single-point contact and interface between residents and construction crews. One contact person per spread shall be provided and shall be available both in person and by phone for up to one year after construction (this measure is also listed as a “during construction measure”).

L-7 The Applicant shall coordinate with affected agencies and proponents of proposed projects within or adjacent to the ROW to minimize cumulative construction effects and avoid preclusion of other planned land uses to the maximum extent feasible. Said coordination shall take place during the final design and permitting stages of the pipeline project and shall include, but not be limited to:

- Provision of pipeline route and construction schedule to affected parties
- Coordination of construction activities with other construction projects
 - Coordination of utility disruptions and road or lane closures.

(This measure is also listed as a “during construction measure”).

L-8 In negotiating access for construction and operation, the Applicant shall disclose all required mitigation measures that may affect the ROW or the adjacent properties. The Applicant shall obtain a signed disclosure form from or certify delivery to each landowner whose property will be traversed by the Proposed Project. The Applicant shall submit a copy of all executed Mitigation Disclosure forms or delivery certification to the CPUC prior to construction.

L-9* Give ample advance notice to potentially affected property owners and tenants (including religious, scientific, and other sensitive land uses) prior to construction of the pipeline. Notices will be provided by: 1) mailing notices to properties within 300 feet of the ROW, and 2) posting bulletins in neighborhoods that could be affected (this measure is also listed as a “during construction measure”).

L-10* Notify residents at least two weeks in advance of lane closures where access to residential areas may be restricted, and develop alternative transportation routes. Further, measures will be taken to ensure that normal access to residential areas is restored, where feasible, at the end of the work day and throughout weekends (this measure is also listed as a “during construction measure”).

L-11* Use a public liaison/contact person before, during, and after construction through residential areas as the single-point contact and interface between residents and the construction crew (this measure is also listed as

a “during construction measure”).

Noise

- N-3 SFPP shall establish a toll-free telephone number for receiving questions or complaints during construction and develop procedures for responding to callers. The number shall be included in the mailed notification (Mitigation Measure N-2) and implemented with Mitigation Measures L-1 through L-3.
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Socioeconomics, Public Services, and Utilities

- S-1 SFPP shall identify a business relations coordinator 60 days before the start of project construction. The responsibility of the business relations coordinator shall include the preparation of a Business Impact Mitigation Plan. At least 30 days prior to the start of construction, the coordinator shall contact all businesses along the pipeline route to inform them of the specific nature of the potential disruptions and to identify related issues and concerns, and to obtain their input regarding impact mitigation. Construction scheduling shall be designed to minimize business impacts. The Business Impact Mitigation Plan shall also integrate applicable mitigation measures from this EIR for this and other issues such as air quality, noise, traffic, and soil contamination. This plan shall be prepared by SFPP and be reviewed and approved by the CPUC and appropriate city and Los Angeles County planning agencies at least 30 days before construction. Following the preparation of the Business Impact Mitigation Plan and within two weeks of commencement of construction in a specific area, the coordinators shall contact the businesses again to implement specific mitigation measures and to resolve any remaining concerns and issues. The CPUC and appropriate city and county agencies shall participate in and monitor the implementation of the plan.
- S-2 SFPP shall meet with individual business owners immediately adjacent to the pipeline ROW at least 30 days prior to the start of construction to determine how construction can be completed with minimal disruption to businesses, based on the access needs, locations, and business hours of each business. Compensation (if any) for the use and blockage of access ways to businesses shall be determined based on documentation provided by business owners regarding loss of revenue or other effects. SFPP shall compensate any business disrupted, displaced, or forced to relocate due to the construction or operation of the proposed project. If a business owner believes business has been diminished without compensation, SFPP shall participate in binding arbitration by neutral arbitrators (agreeable to SFPP and the business owner) to determine the amount of compensation, if any due to the business owner. All businesses shall be informed of this provision thirty (30) days prior to the start of construction.
- S-7* Make arrangements, prepare signage, obtain health approvals, and use reclaimed water, wherever available, for dust suppression during construction (this measure is also listed as a “during construction measure”).
- S-9* Notify Underground Service Alert at least two days prior to construction activities. Underground Service Alert will, in turn, notify affected members of the impending activity at or near the underground installation. The notified members are required to mark the specific location of their facilities within the work area prior to the start of construction. Thereafter, the construction crew shall probe to determine the exact locations of utilities. In some cases the law requires the excavator to expose the underground utilities by hand before full use of power equipment.
- S-10* Require the construction contractor to prepare construction plans designed to protect utilities and shall provide the plans to affected jurisdictions for review, revision, and final approval.
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System Safety and Risk of Upset

- SS-4 SFPP shall have an electrical contractor on-call at all times during construction near the potentially affected facility to repair any circuits if required by the owner in the event they are damaged during construction. The appropriate response to hazards associated with damage to natural gas pipelines will be determined in consultation with natural gas utility operators and local fire departments. Local fire departments shall be notified of the schedule for construction activities in the vicinity of natural gas and other pipelines (this measure is also listed as a “during construction measure”).
- SS-5 SFPP shall prepare a Fire Protection Plan (FPP) and a Hazardous Materials Management Plan for all areas along the pipeline ROW for the construction phase of the project. Contingency analysis and planning shall be conducted to identify fire situations, how to minimize their occurrence, and how to respond should they actually occur. The Plan shall be submitted to local fire departments for review and a copy shall be provided to the CPUC prior to the start of construction for review and approval. The plans shall assure that locations and conditions of storage of fuel comply with rules set forth in the Uniform Fire Code and National Fire Codes.
- SS-12 SFPP shall coat the pipeline to reduce the potential for external corrosion. The documented performance of the proposed coating (Pritec or Synergy brand polyethylene type) must be provided to and approved by the California State Fire Marshal and the CPUC.
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Transportation and Traffic

- T-1 SFPP shall restrict all necessary land closures or obstructions on major roadways to off-peak period in urbanized areas to mitigate traffic congestion and delays which would be caused by lane closures during construction and by exploratory excavations. Lane closures must not occur between 6:00 and 9:30 a.m. and between 3:30 and 6:30 p.m., or as directed in writing by the affected public agency. Alternatively, SFPP shall consider nighttime construction in areas where no residences are located within 500 feet, and where traffic impacts could be reduced by avoidance of daytime construction. SFPP shall have a Traffic Management Plan prepared by a registered Traffic Engineer, describing which traffic lanes would require closure based on the pipeline location within each street, and where night construction is proposed. This plan shall be approved by each affected local jurisdiction and by the CPUC prior to construction and implemented by SFPP (this measure is also listed as a “during construction measure”).
- T-2 SFPP shall develop and implement detailed Traffic Control Plans (TCPs), prepared by a registered Traffic Engineer, for the entire pipeline route at all locations where construction activities would interact with the existing transportation system. Input and approval from the responsible public agencies shall be obtained; copies of approval letters from each jurisdiction must be provided to the CPUC prior to the start of construction within that jurisdiction. The TCP shall define the use of flaggers, warning signs, lights, barricades, cones, etc. according to standard guidelines outlined in the Caltrans Traffic Manual, the Standard Specifications for Public Works Construction, and the Work Area Traffic Control Handbook (WATCH) (this measure is also listed as a “during construction measure”).
- T-3 Prior to finalizing construction plans, SFPP shall work with each jurisdiction to identify all land uses along the ROW with access concerns. Where possible based on existing substructure, SFPP shall attempt to install the pipeline in a street location which minimizes access problems (e.g., where major businesses are located on the north side of a divided street, consider keeping construction on the south side of the street). SFPP shall also develop construction scheduling in a manner that minimizes impacts to businesses or residential areas, scheduling construction to avoid the hours or days of the week during which businesses receive the most customers, and avoiding peak traffic times adjacent to residential areas.
- T-4 SFPP shall give written notification to all landowners, tenants, business operators, and residents along the ROW of the construction schedule, and shall explain the exact location and duration of the pipeline and construction activities within each street (e.g., which lane/s will be blocked, at what times of day, and on what dates). SFPP shall identify any potential obstructions to their access, and shall make alternative access provisions. The written notification shall include a toll-free telephone number for SFPP’s Business Coordinator (see Mitigation

Measures S-1 and S-2 in Socioeconomics, Section C.10) and shall encourage affected parties to discuss their concerns with SFPP prior to the start of construction so individual problems and solutions can be identified. Alternative access provisions shall include SFPP-provided signage and alternate parking as provided and approved by local agencies. The notification shall be provided in conjunction with that required in Mitigation Measures L-1 and L-2 (this measure is also listed as a “during construction measure”).

- T-7 SFPP shall coordinate in advance with emergency service providers to avoid restricting movements of emergency vehicles. Police departments, fire departments, ambulance services, and paramedic services shall be notified in advance by SFPP of the proposed locations, nature, timing, and duration of any construction activities and advised of any access restrictions that could impact their effectiveness. At locations where access to nearby property is blocked, provision shall be ready at all times to accommodate emergency vehicles, such as plating over excavations, short detours, and alternate routes in conjunction with local agencies. The Traffic Control Plans (Mitigation Measure T-2) shall include details regarding emergency services coordination and procedures, and copies shall be provided to all relevant service providers. Documentation of coordination with service providers shall be provided to the CPUC prior to the start of construction (this measure is also listed as a “during construction measure”).
- T-8 SFPP shall submit the location of proposed staging area(s) to the CPUC and to appropriate local jurisdictions for review and approval. SFPP shall state the size of the area, the purpose (e.g., storage of construction equipment and employee parking), the number of vehicles and pieces of equipment to be stored, and the duration (in number of days and number of hours per day) that each staging area will be used (this measure is also listed as a “during construction measure”).
- T-9 SFPP shall provide a shuttle bus service for construction workers from convenient off-street parking areas to the work sites to minimize traffic volumes and parking demand at the work sites. Sufficient off-street parking shall be provided at the bus service staging areas so that adjacent or nearby parking facilities are not adversely affected. Multiple staging areas shall be utilized, if necessary, to reduce traffic impacts on the roadways serving the staging areas. A plan for use of shuttle buses and parking areas shall be submitted to the CPUC and to the affected local jurisdictions for review and written approval (this measure is also listed as a “during construction measure”).
- T-10 SFPP shall provide an off-street area for the storage of construction equipment, vehicles, and materials to address the increased demand for construction equipment storage. This storage space shall be approved by the CPUC and the affected jurisdiction in writing prior to the start of construction (this measure is also listed as a “during construction measure”).
- T-11 SFPP shall ease the temporary loss of parking spaces through advance notification and temporary replacement of parking spaces. Where the construction activities would eliminate existing parking spaces, SFPP shall post signs (at least 72 hours prior to construction in the area) in conjunction with local agencies and provide written notification to nearby businesses/residents. If the loss of parking spaces would create a hardship (as determined by the affected public agencies), alternative spaces shall be arranged by SFPP, if feasible, and appropriate guide signs installed (this measure is also listed as a “during construction measure”).
- T-11a [See also T-8] SFPP shall submit the location(s) of staging areas to the CPUC and the appropriate local jurisdiction(s) for review and approval 30 days prior to the start of construction. These locations and truck routes used during construction shall avoid residential areas (this measure is also listed as a “during construction measure”).
- T-13 SFPP shall coordinate in advance with public transit agencies to avoid disruption to transit operations. Public transit agencies which operate bus routes on the roadways potentially affected by the proposed construction activities shall be informed in advance of the pipeline project and the potential impacts at bus stop locations. Alternate pick-up/drop off locations shall be determined and signed appropriately. SFPP shall document coordination with transit agencies and provide documentation to the CPUC prior to the start of construction (this measure is also listed as a “during construction measure”).

- T-14 SFPP shall coordinate issues of construction compatibility of rail operations with MTA, Port of Long Beach, and other rail operators as applicable. SFPP and contractors shall plan and implement all activities within the railroad ROW with the appropriate railroad personnel. Railroad representatives shall be on site at all times during construction along active rail lines. SFPP shall submit documentation of coordination with rail operators to the CPUC prior to construction (this measure is also listed as a “during construction measure”).
- T-22* Develop a traffic plan in order to increase safety for the traveling public. Obtain input and approval from responsible public agencies as required. Use flaggers, warning signs, lights, barricades, cones, and other forms of traffic safety devices according to standard guidelines outlined in the Caltrans Traffic Manual, the Standard Specifications for Public Works Construction, and the Work Area Traffic Control Handbook (WATCH) (this measure is also listed as a “during construction measure”).
- T-23* Coordinate with emergency service providers in advance to avoid restricted movements for emergency vehicles. Notify police departments, fire departments, ambulance and paramedic services in advance of the proposed locations, nature, timing, and duration of construction activities and access restrictions that could impact their effectiveness. At locations where access to nearby property is blocked, provisions such as plating over excavations, short detours, and alternate routes shall be made at all times to accommodate emergency vehicles. The traffic plan will include details regarding emergency service coordination and procedures (this measure is also listed as a “during construction measure”).
- T-24* Ease the temporary loss of parking spaces through advance notification and temporary replacement of spaces. Where construction activities would eliminate existing parking spaces, advance signing (at least 72 hours) and notification to nearby residents and businesses will occur. If the loss of spaces would create a hardship, alternative spaces will be arranged, if feasible, and appropriate guide signs installed. The traffic plan will include provisions regarding the loss of existing parking spaces (this measure is also listed as a “during construction measure”).
- T-25* Coordinate in advance with public transit agencies to avoid disruption to transit operations. Public transit agencies which operate bus routes on the roadways potentially affected by the proposed construction activities will be informed in advance of the pipeline project and the potential impacts at bus stop locations. Alternate pick-up/drop-off locations will be determined and signed appropriately (this measure is also listed as a “during construction measure”).
- T-26* Coordinate rail operations compatibility issues with the MTA, Union Pacific Railroad, and other rail operators as applicable. SFPP and contractors will plan and implement activities within the railroad ROW with appropriate railroad personnel. Access to the railroad tracks will be maintained at all times, and access to all rail passenger stations will be maintained during operating hours (this measure is also listed as a “during construction measure”).

APPENDIX A-2

CONSTRUCTION MITIGATION MEASURES

APPENDIX A-2: CONSTRUCTION MITIGATION MEASURES

Each mitigation measure to be implemented during project construction includes definition of specific performance criteria, the level of violation that would occur if the criteria are not met, and the criteria for determining whether the measure is effective.

AIR QUALITY MITIGATION MEASURES

Mitigation Measure A-1: Construction activities within stations that require the use of diesel- or gasoline-powered equipment or that produce fugitive dust may not occur at more than one station at a time during pipeline construction.

Impact: Construction activities result in exceedance of significance thresholds (Class I or II).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP shall submit a list of construction activities that will occur at each station, itemizing all diesel- and gasoline-powered equipment required for each activity (with the exception of pick-up trucks, generators, welding rigs, and light towers) and. **(Level 2) – Prior to the start of station construction**
- PC2 SFPP shall limit construction activities and equipment to those on the approved list. **(Level 2) – During construction.**

Effectiveness Criteria: The EM will not be able to determine the exact level of emission reduction in the field. Verification of performance will result in impact reduction.

Effectiveness Timing: Not applicable

Mitigation Measure A-2: Apply water sprays to all disturbed active construction areas a minimum of two times per day, except when weather conditions warrant a reduction in water application (SCAQMD, 1993). Additionally, dust control shall be adequate to keep fugitive dust from being transmitted outside of the ROW or property boundaries. Increase dust control watering when wind speeds exceed 15 miles per hour for a sustained period of greater than 10 minutes, as measured by an anemometer. The amount of additional watering would depend upon soil moisture content at the time: but no airborne dust should be visible. Cease excavation and grading work when sustained wind speeds exceed 25 mph. SFPP shall document in a written log, the date and time of each watering, and the location(s) watered (by milepost), and the log shall be maintained at the construction site.

Impact: Construction activities result in exceedance of significance thresholds (Class I or II).

Performance Criteria, Violation Level, and Timing:

- PC1 Each construction spread shall operate an anemometer adjacent to dust-producing construction activities when construction is occurring in an unpaved area (SCE ROW, MTA ROW). **(Level 2) - During Construction**
- PC2 SFPP shall apply water spray to all disturbed (i.e., uncovered or unpaved) construction areas a minimum of two times per day, except when soil water content exceeds the level recommended by a soil engineer for compaction (“moist” condition) or when weather conditions (i.e., precipitation) warrant a reduction in water applications. **(Level 2) - During Construction**
- PC3 SFPP to document in a written log, the date and time of each watering, and the location(s) (by milepost) watered. **(Level 2) - During Construction**
- PC4 SFPP shall document those periods when the soil engineer has requested a limitation on watering as a result of soil moisture levels, or when watering was not conducted as a result of weather conditions. **(Level 2) - During Construction**
- PC5 SFPP to check anemometer at regular intervals whenever winds are active (potentially 15 mph or greater) and record wind speed measurements and site measurement taken at in a log to be kept at each spread. **(Level 2) -**

During Construction

- PC6 SFPP to water disturbed areas when wind speeds range are 15 mph or more, as measured by an anemometer, for a sustained period of 10 minutes and soil water content tests “dry.” **(Level 2) - During Construction**
- PC7 SFPP will cease excavation, grading work and other dust-producing construction activities when wind speeds exceed 25 mph for a sustained period of 10 or more minutes. Construction activities can resume when wind speed has remained below 25 mph for more than 15 minutes. **(Level 2) - During Construction**

Effectiveness Criteria: The EM will not be able to determine the exact level of emission reduction in the field. Verification of performance will result in impact reduction.

Effectiveness Timing: Not applicable

Mitigation Measure A-3: Soil stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation.

Impact: Construction activities result in exceedance of significance thresholds (Class I or II).

Performance Criteria, Violation Level, and Timing:

- PC1 Soil stockpiled more than two days (including non-work days) is covered, kept moist (i.e., watered so dust is produced is kept to a minimum), or treated with soil binders. **(Level 2) - During construction**

Effectiveness Criteria: EMs verification of SFPP’s performance will result in reduced fugitive dust. Verification of soil stabilization methods should result in 30-65% emission reduction efficiency; however, it is not possible to measure the effectiveness.

Effectiveness Timing: Not applicable

Mitigation Measure A-4: Trucked soil loads shall be covered using a tarp or other suitable means during transit (SCAQMD, 1993).

Impact: Construction activities result in exceedance of significance thresholds (Class I or II).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP to ensure that all trucked soil loads are covered before they exit the construction area. **(Level 2) -During construction**

Effectiveness Criteria: EMs verification of SFPP’s performance will result in reduced fugitive dust. Verification of soil stabilization methods should result in 30-65% emission reduction efficiency; however, it is not possible to measure the effectiveness.

Effectiveness Timing: Not applicable

Mitigation Measure A-5: Maintain a minimum 12-inch freeboard ratio on haul trucks (SCAQMD, 1993).

Impact: Construction activities result in exceedance of significance thresholds (Class I or II).

Performance Criteria, Violation Level, and Timing:

Effectiveness Criteria: The EM will not be able to determine the exact level of emission reduction in the field. Verification of performance will result in impact reduction.

Effectiveness Timing: Not applicable

Mitigation Measure A-6: Wash streets at the end of each work day if visible soil material is carried onto adjacent public paved roads (SCAQMD, 1993).

Impact: Construction activities result in exceedance of significance thresholds (Class I or II).

Performance Criteria, Violation Level, and Timing:

PC1 SFPP to ensure that at the end of each construction day any visible soil material carried onto adjacent public paved roads is swept up or washed in compliance with the Storm Water Pollution Prevention Plan. **(Level 2) - During construction.**

Effectiveness Criteria: Street sweeping should result in a 25-60% emission reduction efficiency; however effectiveness cannot be observed in the field.

Effectiveness Timing: Not applicable

Mitigation Measure A-7: For construction in station facilities and for staging areas, install a 50-foot (minimum) gravel pad at egress points onto the site from the main road.

Impact: Construction activities result in exceedance of significance thresholds (Class I or II).

Performance Criteria, Violation Level, and Timing:

PC1 Where unpaved egress points meet a paved road, a gravel pad is installed at station facilities and staging areas. Gravel pad shall be at least 50 feet long and shall consist of gravel 3-4 inches thick using gravel ¾ to 1 inch minus, and as wide as the driveway. **(Level 2) - Prior to construction, Construction, and Post-Construction**

Effectiveness Criteria: The EM will not be able to determine the exact level of emission reduction in the field. Verification of performance will result in impact reduction.

Effectiveness Timing: Not applicable

Mitigation Measure A-8: Traffic speeds on all unpaved roads is to be reduced to 15 mph or less; restrict speed to 5 mph or less within 100 feet of the entrance to a paved road (SCAQMD, 1993). SFPP shall ensure that all project personnel (including contractors, subcontractors, and service company representatives) sign a statement acknowledging their awareness of the unpaved road speed limit restriction. The signed statement shall specify that 15 mph is the maximum speed limit on any unpaved road, and 5 mph is the maximum speed limit within 100 feet of an entrance to a paved road.

Impact: Construction activities result in exceedance of significance thresholds (Class I or II).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP to post a 15 mph speed limit sign (in plain view) along all unpaved roads and a 5 mph speed limit sign within 125 feet of the entrance to a paved road. **(Level 2) - Prior to and during construction.**
- PC2 Construction traffic no more than 15 mph on any unpaved road and no more than 5 mph within 100 feet of the entrance to a paved road. **(Level 2) - During construction.**
- PC3 SFPP shall provide verification that all project personnel (including contractors, subcontractors, and service company representatives) are aware of project speed limits. **(Level 1) - During construction**

Effectiveness Criteria: EM responsible for verifying the speed limit restrictions. Verification of speed limit restrictions will result in a significant emission reduction efficiency.

Effectiveness Timing: Not applicable

Mitigation Measure A-9: Dispose of surplus excavated material in accordance with local ordinances. Maintain receipts for disposal of all materials at the construction site.

Impact: Construction activities result in exceedance of significance thresholds (Class I or II).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP shall provide copies of local ordinances (if any) that address disposal of surplus excavated materials. **(Level 1) - Prior to construction and During construction**
- PC2 SFPP make available for inspection the transport and disposal receipts for all construction materials (including, but not limited to, excavated materials). **(Level 1) - During construction**

Effectiveness Criteria: The EM will not be able to determine the exact level of emission reduction in the field. Verification of performance will result in impact reduction.

Effectiveness Timing: Not applicable

Mitigation Measure A-10: Construction equipment shall be maintained in tune, per manufacturing specifications. SFPP/contractor shall provide a maintenance schedule for all vehicles and equipment. SFPP/contractor shall provide a certification from a third-party certified mechanic stating the timing of all internal combustion construction equipment engines have been properly maintained. SFPP/contractor shall re-certify each piece of construction equipment/vehicle based on the maintenance schedule.

Impact: Construction activities result in exceedance of significance thresholds (Class I or II).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP provides maintenance schedule for all vehicles and equipment (identified by individual identification number). **(Level 2) - Prior to construction.**
- PC2 SFPP provides a certification (signed and dated) from a third-party certified mechanic stating that the timing of all internal combustion construction equipment engines have been properly maintained. The identification number for each vehicle must be listed on the certification form, as well as on the outside (in plain view) of each piece of construction equipment. **(Level 2) - Prior to construction.**
- PC3 SFPP re-certifies each piece of construction equipment/vehicle based on the maintenance schedule. **(Level 2) - During construction.**

Effectiveness Criteria: Effectiveness of the timing adjustment for construction equipment cannot be measured; certification would be expected to result in impact reduction.

Effectiveness Timing: Not applicable

Mitigation Measure A-11: SFPP/contractor shall use catalytic converters on all gasoline equipment (except for small [2-cylinder] generator engines). If this measure is not implemented, emissions from gasoline equipment shall be offset by other means (e.g., Emission Reduction Credits). SFPP/contractor shall provide a certification from a third-party certified mechanic stating that a catalytic converter is installed on each applicable vehicle and gasoline-fueled equipment.

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP to provide a certification (signed and dated) from a third-party certified mechanic that a catalytic converter is installed on each applicable vehicle and gasoline-fueled equipment (excluding small gas-powered equipment such as tampers and pumps). The individual identification number for vehicle/gasoline-fueled equipment must be listed on the certification form, as well as on the outside (in plain view) of each vehicle and gasoline-fueled equipment. **(Level 2) - Prior to Construction.**

Effectiveness Criteria: Reduction in impact cannot be measured or verified in the field.

Effectiveness Timing: Not applicable

Mitigation Measure A-12: Retard diesel engine injection timing by two degrees before top center on all construction equipment that was manufactured before 1996, and which does not have an existing IC engine warranty with the manufacturer. SFPP/contractor shall provide a certification from a third-party certified mechanic prior to start of construction, stating the timing of all diesel-powered construction equipment engines have been retarded two degrees Before Top Center.

Impact: Construction activities result in exceedance of significance thresholds (Class I or II).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP provides a certification (signed and dated) from a third-party certified mechanic stating that the timing of all diesel-powered construction equipment engines have been retarded two degrees Before Top Center. The identification number for each vehicle must be listed on the certification form, as well as on the outside (in plain view) of each piece of construction equipment. **(Level 2) - Prior to construction.**
- PC2 SFPP re-certifies each piece of construction equipment during scheduled maintenance. SFPP provides maintenance schedule for each piece of construction equipment. **(Level 2) - Prior to construction.**

Effectiveness Criteria: Effectiveness of the timing adjustment for construction equipment cannot be measured; certification would be expected to result in impact reduction.

Effectiveness Timing: Not applicable

Mitigation Measure A-13: Substitute electric powered equipment for diesel and gasoline powered equipment, where feasible. SFPP shall submit an analysis showing available electric equipment and demonstrate their feasibility for this project.

Impact: Construction activities result in exceedance of significance thresholds (Class I or II).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP shall ensure that electric-powered equipment is used in place of diesel- or gasoline-powered equipment after an analysis for availability and feasibility has been submitted. **(Level 2) - During construction**

Effectiveness Criteria:

- PC1 SFPP shall ensure that electric-powered equipment is used in place of diesel- or gasoline-powered equipment after an analysis for availability and feasibility has been submitted. **(Level 2) - During construction**

Effectiveness Timing: Not applicable

Mitigation Measure A-14: Cease construction during periods of high ambient pollutant concentrations (i.e., Stage 2 smog alerts) near the construction area (SCAQMD, 1993). SFPP/contractor shall call (800) CUT-SMOG for daily ozone forecasts. The Applicant shall document in a written log the ozone forecast on a daily basis.

Impact: Construction activities result in exceedance of significance thresholds (Class I or II).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP shall make available for inspection a written, daily log for ozone forecasts from (800) CUT-SMOG. **(Level 1) - During construction**
- PC2 SFPP shall cease all dust- and emission-producing activities during Stage 2 (or greater) smog alerts. **(Level 3) - During construction**

Effectiveness Criteria: The EM will not be able to determine the exact level of emission reduction in the field. Verification of performance will result in impact reduction.

Effectiveness Timing: Not applicable

Mitigation Measure A-15: Use high pressure injectors on all diesel engines that were manufactured before 1996, and which do not have existing IC engine warranties with the manufacturer. SFPP/contractor shall provide documentation of warranty and manufacture date or a certification from a third-party certified mechanic stating that all diesel construction equipment engines are utilizing high pressure fuel injectors.

Impact: Construction activities result in exceedance of significance thresholds (Class I or II).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP provides a certification (signed and dated) from a third-party certified mechanic stating that all diesel construction equipment engines are utilizing high pressure fuel injectors. The identification number for each vehicle must be listed on the certification form, as well as on the outside (in plain view) of each applicable construction equipment vehicle. **(Level 2) - Prior to construction.**

Effectiveness Criteria: Effectiveness of the installation of high pressure injectors on construction equipment cannot be measured; certification would be expected to result in impact reduction.

Effectiveness Timing: Not applicable

Mitigation Measure A-16: Schedule all material deliveries to the construction spread outside of peak traffic hours, and minimize other truck trips during peak traffic hours, or as approved by local jurisdictions. Material deliveries may be made to the staging area(s), if in accordance with other mitigation measures.

Impact: Construction activities result in exceedance of significance thresholds (Class I or II).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP shall provide verification that the contractor(s) and subcontractor(s) have been instructed to schedule all material deliveries to the construction spread outside of peak traffic hours and to minimize other truck trips during peak traffic hours. **(Level 1) - During construction**

Effectiveness Criteria: The EM will not be able to determine the exact level of emission reduction in the field. Verification of performance will result in impact reduction.

Effectiveness Timing: Not applicable.

Mitigation Measure A-17: Use only solar powered traffic signs (no gasoline-powered generators shall be used) except for night construction.

Impact: Construction activities result in exceedance of significance thresholds (Class I or II).

Performance Criteria, Violation Level, and Timing:

PC1 SFPP ensures that only solar-powered traffic signs (including arrow boards) are used during daylight construction. **(Level 2) - During construction**

Effectiveness Criteria: The EM will not be able to determine the exact level of emission reduction in the field. Verification of performance will result in impact reduction.

Effectiveness Timing: Not applicable

Mitigation Measure A-18: Configure construction parking to minimize traffic interference (SCAQMD, 1993); coordinate with implementation of Mitigation Measures T-10, T-11, and 11a.

Impact: Construction activities result in exceedance of significance thresholds (Class I or II).

Performance Criteria, Violation Level, and Timing:

PC1 SFPP shall configure construction parking so that traffic is not impacted. **(Level 2) - During construction**

Effectiveness Criteria: The EM will not be able to determine the exact level of emission reduction in the field. Verification of performance will result in impact reduction.

Effectiveness Timing: Not applicable

Mitigation Measure A-19: Prohibit all vehicles from idling in excess of 10 minutes. SFPP shall ensure that project personnel operating vehicles (including contractors, subcontractors, and service company representatives) sign a statement acknowledging their awareness of idling restrictions. Signs shall be posted in plain view within the construction spread area stating that vehicles shall not idle more than 10 minutes and must be shut off prior to the 10 minute limitation. This measure does not apply to equipment performing construction operations (i.e., side-boom tractor holding or lowering pipe into trench).

Impact: Construction activities result in exceedance of significance thresholds (Class I or II).

Performance Criteria, Violation Level, and Timing:

PC1 SFPP to ensure that project personnel operating vehicles (including contractors, subcontractors, and service company representatives) sign a statement acknowledging their awareness of the idling restriction; signed statements shall be maintained at each spread. **(Level 1) - Prior to and during construction.**

PC2 Signs shall be posted in plain view within the construction spread area (including staging areas, extra work space, right-of-way, storage yards, etc.) stating that vehicles shall not idle for more than ten minutes and must be shut off prior to the ten minute limitation. **(Level 2) - Prior to and during construction.**

Effectiveness Criteria: The effectiveness of this measure is not measurable; however, verification that compliance has occurred should result in a reduction in impacts.

Effectiveness Timing: Not applicable

Applicant-Proposed Measure A-20*: Use low emission on-site mobile construction equipment, where feasible (see Mitigation Measure A-13).

Applicant-Proposed Measure A-21*: Maintain equipment in tune, per manufacturer's specifications (see Mitigation Measure A-10).

Applicant-Proposed Measure A-22*: Use catalytic converters on gasoline powered equipment (see Mitigation Measure A-11).

Applicant-Proposed Measure A-23*: Retard diesel engine injection timing by four degrees, where feasible (see Mitigation Measure A-12).

Applicant-Proposed Measure A-24*: Use reformulated, low emission diesel fuel [Note: this is the only fuel currently available in California]

Applicant-Proposed Measure A-25*: Substitute electric and gasoline powered equipment for diesel powered equipment where feasible (see Mitigation Measure A-13).

Applicant-Proposed Measure A-26*: Where applicable, do not leave equipment idling for prolonged periods (see Mitigation Measure A-19).

Applicant-Proposed Measure A-27*: Curtail (cease or reduce) construction during periods of high ambient pollutant concentrations (stage 2 smog alerts)(see Mitigation Measure A-14).

Applicant-Proposed Measure A-28*: Water the site and the equipment in the morning and evening (see Mitigation Measure A-2).

Applicant-Proposed Measure A-29*: Schedule activities to minimize the amount of exposed excavated soil during and after the end of work periods (see Mitigation Measure A-3).

Applicant-Proposed Measure A-30*: Dispose of surplus excavated material in accordance with local ordinances, and use sound engineering practices (see Mitigation Measure A-9).

Applicant-Proposed Measure A-31*: Sweep streets on a daily basis if silt is carried over to adjacent public thoroughfares or occurs as a result of hauling (see Mitigation Measure A-6).

Applicant-Proposed Measure A-32*: Suspend dirt handling operations during high winds in accordance with Rule 403 requirements (see Mitigation Measure A-2).

Applicant-Proposed Measure A-33*: Maintain a minimum 12-inch freeboard ratio on haul trucks (see Mitigation Measure A-5).

Applicant-Proposed Measure A-34*: Cover payloads on haul trucks using tarps or other suitable means (see Mitigation Measure A-4).

BIOLOGICAL RESOURCES MITIGATION MEASURES

Mitigation Measure B-1 deleted (applied only to open-cut crossing of Compton Creek)

Mitigation Measure B-2: SFPP shall employ an environmental monitor, approved by CPUC, who shall monitor activity in DeForest Park during the excavation of the bore pit to ensure that eucalyptus trees are not damaged or removed.

Impact: Construction of the Proposed Project has the potential to damage or remove eucalyptus trees that are winter roosting habitat for raptors (Class III).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP Environmental Inspector regularly (at least every two hours) monitors activities during excavation of bore pit in DeForest Park to ensure eucalyptus trees are not damaged or destroyed. **(Level 2) - During construction**
- PC2 If any trees are damaged, SFPP provides report from qualified arborist to determine extent of damage to specimen trees. **(Level 2) - During and immediately after construction.**
- PC3 Eucalyptus trees severely damaged or destroyed (as determined by qualified arborist) are replaced at a ratio of 4:1 with vigorous saplings of the same species as the damaged or destroyed trees. **(Level 1) - During construction.**

Effectiveness Criteria: Planted trees vigorous after 5 years.

Effectiveness Timing: Prior to, during, and after construction.

Mitigation Measure B-3: Three morning surveys by a CDFG-approved biologist shall take place one week prior to bore pit excavation in DeForest Park if construction will take place in the winter months (December 1 through March 31). If the biologist notes a raptor flushing or finds recent castings at the base of trees, raptors will be considered to be present. If raptors are present, then construction may not take place between the hours of 5 pm and 10 am.

Impact: Construction of the Proposed Project has the potential to damage or remove eucalyptus trees which are winter roosting habitat for raptors (Class III).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP provides written documentation of approval of the project wildlife biologist from the California Department of Fish and Game. **(Level 1) - Prior to start of off-street construction in DeForest Park**
- PC2 Project biologist conducts of a three-consecutive-morning wildlife survey in DeForest Park if construction takes place between December 1 and April 1. **(Level 2) - One week and three days prior to beginning bore pit excavation in DeForest Park**
- PC3 SFPP provides written results of DeForest Park wildlife survey to CPUC designee. **(Level 1) - Five days**

prior to beginning bore pit excavation in DeForest Park

PC4 If raptors are present (as determined by survey), construction does not occur between 5 p.m. and 10 .am.
(Level 3) - During construction (excavation and backfill) at bore pit in DeForest Park

Effectiveness Criteria: Survey methodology/ results must meet approval of CPUC/County/EQAP biological specialist prior to allowing construction in specified segments; effectiveness to be assumed in that case.

Effectiveness Timing: During construction.

Mitigation Measure B-4 deleted

Mitigation Measure B-5 deleted

Applicant-Proposed Measure B-8* deleted

Applicant-Proposed Measure B-9*: SFPP would use “standard pipeline stream-crossing techniques including Best Management Practices for storm water” to prevent sedimentation. (see Applicant -Proposed Measure H-8*)

Applicant-Proposed Measure B-10*: The Applicant’s PEA prescribes spill containment measures for the refueling and lubrication of construction equipment which should prevent accidental spills. (See Applicant-Proposed Measure H-9*)

Applicant-Proposed Measure B-11*: Pipe welding, coating, and similar work would occur only outside the water course. (See Applicant-Proposed Measure H-10*)

Applicant-Proposed Measure B-12* deleted

CULTURAL RESOURCES MITIGATION MEASURES

Mitigation Measure C-1: An environmental monitor approved by CPUC, shall monitor all trenching activities (including excavation of bore pits). A qualified archaeologist shall be on call (under contract to SFPP) at all times; if a potential cultural resource is found, the archaeologist shall be consulted and/or called to the site for a determination regarding significance. Any cultural resources identified shall be avoided to the maximum extent feasible. If not feasibly avoided, a Phase 2 significance assessment of the resource shall be conducted (see Mitigation Measure C-2 below) pursuant to Federal, State, and local regulations and guidelines. If significant resources are identified during the Phase 2 program, they shall be subject to Phase 3 data recovery mitigation.

Impact 1: Construction of the proposed project would involve trenching which has the potential to disturb intact deposits from site LAN-389 (Class II).

Impact 2: Discovery of previously unrecorded cultural resources during trenching (e.g., at bore pits, Compton Creek crossing, or adjacent to historic sites identified above) (Class II).

Performance Criteria, Violation Level, and Timing:

PC1 SFPP has qualified environmental inspector monitor ground disturbing activities (including any grading and

- vegetation removal). **(Level 3) - During construction.**
- PC2 If cultural resources are found, construction avoids identified cultural resources, or if not avoided, SFPP conducts a Phase 2 significance assessment of the resource (see also Mitigation Measures C-2) **(Level 3) - Prior to additional ground disturbing activities.**
- PC3 SFPP submits resume of qualified project on-call archaeologist to CPUC. **(Level 2) - 15 days prior to start of construction**
- PC4 SFPP provides written documentation and results of consultation with project archaeologist when potential cultural resources are found. **(Level 3) - During construction**
- PC5 SFPP abides by determination and recommendations of project archaeologist. **(Level 3) - During construction**

Effectiveness Criteria: Review/approve Phase 1 study revised pipeline alignments, or if required, subsequent archaeological investigations.

Effectiveness Timing: Review and approve prior to final project design and during construction.

Mitigation Measure C-2: If during excavation, a site is discovered that may be affected by the project, and the resources are not feasibly avoidable, Phase 2 archaeological testing shall be completed. The site's significance within the area of potential impact shall be assessed prior to continuation of excavation, pursuant to relevant cultural resource regulations and guidelines. Basic scientific data required for an evaluation of significance shall be obtained through test excavations designed to determine:

- The vertical and horizontal extent of the deposit
- The structure of the deposit in terms of cultural stratigraphy, features, burials, etc
- The density and diversity of artifacts and ecofacts in the deposit
- The nature and extent of previous disturbance
- Disturbance-related limitations of the data
- Research questions that may be addressed by analysis of the site
- Age of site occupation or occupations.

A testing program and site evaluation shall be conducted in accordance with the applicable Federal, State, and local archaeological guidelines and shall address the questions contained in local guidelines and the SHPO checklists. All excavated non-burial related artifacts and associated documentation shall be curated at a local facility meeting local, State, and Federal requirements and guidelines.

Impact 1: Construction of the proposed project would involve trenching which has the potential to disturb intact deposits from site LAN-389 (Class II).

Impact 2: Discovery of previously unrecorded cultural resources during trenching (e.g., at bore pits, Compton Creek crossing, or adjacent to historic sites identified above) (Class II).

Performance Criteria, Violation Level, and Timing:

- PC1 Phase 2 testing does not begin until SFPP provides copies of all approvals from the appropriate agencies. **(Level 2) - Prior to start of Phase 2 testing in affected area.**
- PC2 Test excavations shall address the above seven bulleted items and shall address the questions contained in local guidelines and the SHPO checklists. **(Level 2) - During Phase 2 testing.**
- PC3 Phase 2 testing and approval of reports must be completed prior to construction activities resuming in the area. Evidence of such testing and approval will be written release from the CPUC or designee. **(Level 3) - Prior to resuming construction in affected area.**

Effectiveness Criteria: All newly discovered sites were tested, and EM approved of the report, site evaluations, and recommendations.

Effectiveness Timing: Prior to project construction in affected area

Mitigation Measure C-3: If Phase 2 investigations determine that a significant archaeological site will be affected by the project and if avoiding or filling over the surface of the archaeological site is not possible, SFPP shall conduct Phase 3 archaeological data recovery investigations in accordance with applicable county, State, and Federal regulations. SFPP shall facilitate coordination and compliance with the CPUC, local agencies, the SHPO, the Advisory Council on Historic Preservation, and the U.S. Army Corps of Engineers. Coordination shall include review and approval of a site-specific mitigation plan by local, State, and Federal agencies before any archaeological mitigation or construction begins.

A data recovery plan, including a site-specific research design, shall be developed, reviewed, and approved by relevant jurisdictions. The plan shall be implemented before any archaeological work or construction work begins in the vicinity of the affected archaeological site. The research design shall describe the following for each affected site:

- The significance of the site, as defined by historic contexts based on local research questions
- Theoretical bases of the research that is planned; regional and site-specific research topics and questions to be addressed through implementation of the mitigation plan, with reference to relevant research questions
- Specific types of data required to address each research topic and question; the sample size required for each type of data; methods and techniques planned to obtain data in the field
- Laboratory and analytic procedures necessary to link raw data with the research questions; the logic to be used in interpreting the data
- How the data will be compared both qualitatively and quantitatively with data from previous studies addressing the same research issues.

All excavated artifacts and associated documentation shall be curated at a local facility meeting local, State, and Federal requirements and guidelines.

The mitigation plan shall describe a program and process for monitoring construction activities in the vicinity of known sites, if any, and for treating emergency discoveries of previously unknown cultural resources.

Impact 1: Construction of the proposed project would involve trenching which has the potential to disturb intact deposits from site LAN-389 (Class II).

Impact 2: Discovery of previously unrecorded cultural resources during trenching (e.g., at bore pits, Compton Creek crossing, or adjacent to historic sites identified above) (Class II).

Performance Criteria, Violation Level, and Timing:

- | | |
|-----|---|
| PC1 | SFPP conducts Phase 3 archaeological data recovery investigation in accordance with applicable local, county, State, and Federal regulations and consistent with the requirements of the CPUC. (Level 2) - Prior to resuming construction at the sensitive site |
| PC2 | SFPP facilitates and documents coordination and compliance with the CPUC, local agencies, the SHPO, the Advisory Council on Historic Preservation, and the U.S. Army Corps of Engineers. (Level 1) - Prior to resuming construction at the sensitive site |
| PC3 | Prior to a archaeological mitigation or resumption of construction activities, SFPP coordinates review and approval of a site-specific archaeological data recovery plan by local, State, and Federal agencies. (Level 1) - Prior to archaeological mitigation and resuming construction at the sensitive site |
| PC4 | SFPP provides a data recovery plan, including a site-specific research design. (Level 1) -Prior to |

implementing the archaeological mitigation at the sensitive site

PC5 SFPP has all excavated artifacts and associated documentation curated at a local facility meeting local, State, and Federal requirements and guidelines. **(Level 2) - During construction**

Effectiveness Criteria: Unavoidable impacts to all significant sites will have been mitigated, and reports reviewed and approved.

Effectiveness Timing: Prior to project construction

Applicant-Proposed Measure C-4*: Site LAN-389. Trenching along Rancho Way/Laurel Park Drive between Del Amo Blvd. and Victoria Street should be coordinated with a qualified archaeologist (an individual meeting the criteria for Archaeologist with a prehistoric research emphasis under Title 36 CFR, Part 61) to ensure that the area near site LAN-389 is monitored during construction for the presence of cultural materials. Should significant materials be discovered, work in the immediate site vicinity should cease until such time the archaeologist can formulate an appropriate mitigation or data recovery plan and implement the plan as determined necessary.

Impact: Areas of prehistoric resource high sensitivity with poor surface visibility or potential alluviation may not be identified and could be impacted during construction (Class II)

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP provides documentation of coordination with qualified archaeologist regarding monitoring of trenching at Site LAN-389 . **(Level 3) - During construction.**
- PC2 SFPP submits resume of qualified archaeologist (as defined by Title 36 CFR, Part 61 with a prehistoric research emphasis) to CPUC for approval. **(Level 2) - 15 days prior to start of construction at Site LAN-389.**
- PC3 Site LAN-389 is monitored during construction for presence of cultural materials. **(Level 2) - During construction**
- PC4 If significant materials are discovered at Site LAN-389, work moves 200 feet away from the significant materials and does not resume until directed to do so by both the archaeologist and the CPUC. **(Level 3) - During construction**
- PC5 SFPP abides by determination and recommendations of the archaeologist for Site LAN-389. **(Level 3) - During construction**

Effectiveness Criteria: Unavoidable impacts to all significant sites will have been mitigated, and reports reviewed and approved.

Effectiveness Timing: During and post project construction

Applicant Proposed Measure C-5*: Discoveries during Construction. Although no visible cultural resources were observed during the survey, sites and objects may be obscured by vegetation or buried by sediments. If cultural resources are encountered during project construction, construction should be halted or diverted to allow an archeologist an opportunity to assess the resource. Prehistoric archeological site indicators include chipped chert and obsidian tools and tool manufacture waste flakes, grinding implements such as mortars and pestles, and darkened soil that contains aboriginal dietary debris such as bone fragments and shellfish remains. Historic site indicators include, but are not limited to, ceramic, glass, and metal remains. (see also Mitigation Measure C-1)

Impact: Areas of prehistoric or historic resource high sensitivity with poor surface visibility or potential alluviation may not be identified and could be impacted during construction (Class II)

Performance Criteria, Violation Level, and Timing:

PC1 If prehistoric or historic site indicators (such as chipped chert, obsidian tools, grinding implements, old glass, etc.) are discovered, construction activities move 200 feet away from the materials and do not resume until directed to do so by both the project archaeologist and the CPUC. **(Level 3) - During construction**

Effectiveness Criteria: Unavoidable impacts to all significant sites will have been mitigated, and reports reviewed and approved.

Effectiveness Timing: During and post project construction

Applicant-Proposed Measure C-6*: Section 7050.5(b) of the California Health and Safety Code should be implemented in the event that human remains, or possible human remains are located. It states:

In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code.

The County Coroner, upon recognizing the remains as being of Native American origin, is responsible to contact the Native American Heritage Commission within 24 hours. The Commission has various powers and duties to provide for the ultimate disposition of any Native American remains, as does the assigned Most Likely Descendant. Sections 5097.98 and 5097.99 of the Public Resources Code also call for “protection to Native American human burials and skeletal remains from vandalism and inadvertent destruction.” To achieve this goal, it is recommended the construction personnel on the project be instructed as to the potential for discovery of cultural or human remains, and both the need for proper and timely reporting of such finds, and the consequences of failure thereof.

Impact: Impacts to human remains of extreme sensitivity to Native American values (Class II)

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP implements procedures specified in CEQA Appendix K, Section VIII if human remains are discovered. **(Level 3) - When human remains are discovered**
- PC2 SFPP implements security measures to ensure that burials are not vandalized. **(Level 3) - When burials are discovered**
- PC3 SFPP applies the statutes of the Native American Graves Protection and Repatriation Act (NAGPRA) when burials are identified. **(Level 2) - When burials are discovered.**
- PC4 SFPP conducts an educational workshop for project personnel (including contractor, subcontractor and service personnel), that discusses prohibited activities, including vehicle use and disturbance of human remains, that can adversely affect cultural resources and who to contact is a potential resource is discovered. **(Level 1) - Prior to construction and during construction.**
- PC5 Section 7050.5(b) of the California Health and Safety Code is implemented. **(Level 3) - When human remains are discovered**

Effectiveness Criteria: No unauthorized disturbance, intrusion, or collection has taken place at archaeological sites or sensitive areas; no pedestrian or vehicular traffic has caused impact to the resources and any burials are treated according to the CRMP and PA.

Effectiveness Timing: Prior to and during project construction

ENVIRONMENTAL CONTAMINATION MITIGATION MEASURES

Mitigation Measure EC-1: SFPP shall re-evaluate low potential sites if construction parameters vary in the following ways: trench depth exceeds planned depth of seven feet and will potentially encounter contaminated groundwater or the location of the trench is re-located out of the public right-of-way (where trenching could occur in a “low” potential site). If these conditions are met, SFPP shall reevaluate all "low" potential sites to determine whether they need to be reclassified as medium or high impact potential sites. A qualified and approved environmental consultant (California registered geologist or civil engineer experienced in environmental assessments acceptable to CPUC) shall perform the review and evaluation, and the results shall be reviewed and approved by the appropriate Los Angeles County Environmental Protection Division or DTSC prior to construction. A copy of the DTSC or Los Angeles County Environmental Protection Division approval letter must be provided to the CPUC prior to start of construction.

Impact: Construction through areas with identified contaminated sites could affect workers or nearby public (Class II).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP re-evaluates low potential sites if construction parameters vary from planned trench location and depth. **(Level 2) - During construction**
- PC2 SFPP has approved environmental consultant perform environmental review at all low potential sites adjacent to project areas where total trench depth is greater than 7 feet or re-located out of the public right-of-way. Review should identify construction areas on design plans that meet the above criteria and document that low potential environmental contamination sites are adjacent. Agency files for the adjacent low potential sites should be reviewed to evaluate potential impacts to the project. Report should document site location, pipeline design/construction parameters, and environmental analysis of potential impacts and recommendations for avoidance or mitigation. **(Level 2) - During construction**
- PC3 SFPP informs landowner or responsible public agency of the discovery of any hazardous site. **(Level 2) - During construction, immediately after find**
- PC4 SFPP consults with landowner or responsible public agency regarding treatment plans. **(Level 2) - Prior to implementing treatment plan**
- PC5 SFPP provides to the landowner a written report explaining cleanup activities within 30 days of completion of cleanup on the landowner’s property. **(Level 2) - Within 30 days of completion of cleanup**

Effectiveness Criteria: The reports' analysis should confirm absence or evidence of contamination. Recommendations for mitigation should be reviewed and approved by the responsible agency or their representatives. Contamination from low impact potential sites does not occur.

Effectiveness Timing: Prior to project construction or during construction.

Mitigation Measure EC-6: Assign trained personnel during active trenching to observe visual evidence of contamination and perform monitoring with appropriate testing equipment (photoionization or flame ionization detectors), sampling and direct laboratory testing as necessary to identify areas of previously unknown soil contamination within the excavation. These personnel should meet the federal OSHA requirement for 40-Hour Training for Hazardous Waste Operations and Emergency Response (29CFR1910.120) and be familiar with the calibration and operation of the testing equipment.

The monitoring personnel shall have authority to implement an approved contingency plan when hazardous materials are encountered. Contingency plans, developed and approved by the County Health Department or California DTSC prior to construction, shall present specific alternatives for action to be taken in the event contaminated soils are encountered. The plan shall specify procedures for monitoring, identifying, handling and disposing of hazardous waste, including contamination from unanticipated tanks or pipelines within the excavation. The contingency plan shall include a health and safety plan prepared by a Certified Industrial Hygienist specifying site monitoring and

personal protective equipment.

Impact: Construction workers or nearby members of the public could be affected by encountering unanticipated contaminated soils (Class II).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP assigns personnel with 40-hour OSHA training to observe the trenching and monitor evidence of contamination visually and have portable vapor analyzers such as photoionization, flame ionization or hydrocarbon detectors available for use on short notice. **(Level 2) - During construction**
- PC2 Observer(s) keep(s) a daily record/notebook documenting calibration of test equipment, work location and activity, date and time, results of visual observations and field monitoring, recommended mitigation measures, and implementation of mitigation. **(Level 2) - During construction**
- PC3 SFPP provides Contingency Plan(s) that have been approved by County Health Department or California DTSC. **(Level 1) - Prior to construction**

Effectiveness Criteria: Conduct periodic site visits during construction to review field notes and confirm that proper procedures are being implemented.

Effectiveness Timing: During project construction while trenching and disposal of contaminated soil is occurring.

Applicant Proposed Measure EC-13*: SFPP will assign trained personnel during active trenching to observe visual evidence of contamination (staining) and/or odorous conditions. Monitoring with appropriate testing equipment (photo-ionization or flame ionization detectors) will be performed and sampling and laboratory testing will be conducted as necessary to identify areas of previously unknown soil and/or vapor contamination within the excavation. Trained personnel will meet the federal OSHA requirement for 40-hour Training for Hazardous Waste Operations and Emergency Response (29 CFR 1910.120), and be familiar with the calibration and operation of the testing equipment.

The monitoring personnel will have the authority to implement an approved contingency plan when hazardous materials are encountered. Contingency plans, developed prior to construction, would identify specific measures, precautions and alternatives for action to be taken if/when contaminated soils or vapors are encountered in the pipeline route. The plan would specify procedures for monitoring, identifying, handling and disposing of hazardous materials/waste, including contamination from unanticipated sources within the excavated trench (see Mitigation Measure EC-6).

HYDROLOGY AND WATER RESOURCES MITIGATION MEASURES

Mitigation Measure H-4: In place of Mitigation Measures H-2 and H-3, bore the Compton Creek crossing to a depth of at least 10 feet below the channel bottom.

Impact: Potential for scour in Compton Creek to expose buried pipeline (assuming that the crossing is trenched) (Class II)

Performance Criteria, Violation Level, and Timing:

- PC1 If installing pipeline less than 10 feet below channel bottom, SFPP shall submit engineering computations prepared by a registered Civil Engineer with experience in river sediment transport for scour depth (or scour mitigation) at all crossings. Engineering computations to be site-specific and show methodology, assumptions, input data used, stream profiles, and other information as necessary. **(Level 1) - Prior to construction.**
- PC2 Crossings shall be constructed as described in approved, engineer-designed, site-specific plans. **(Level 3) - During construction**

Effectiveness Criteria: Pipeline is buried at the required depth and worst-case scours do not result in exposed pipe.

Effectiveness Timing: Monitor after heavy rain storms after construction for lifetime of pipeline

Mitigation Measure H-5: Bore the San Gabriel River crossing to minimize potential for a spill into the river.

Impact: Pipeline expose at bridge crossing could result in spill reaching ocean (Class I)

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP submits site-specific bore plans prepared by a licensed contractor with experience in river boring. **(Level 2) - Prior to construction.**
- PC2 Bore plans clearly indicate the depth below scour depth that the pipeline will be installed. **(Level 2) - Prior to construction.**

Effectiveness Criteria: Containment of contamination within ROW.

Effectiveness Timing: During and after construction

Applicant-Proposed Measure H-6*: If dewatering is required, the groundwater would be collected, tested for contamination and disposed in an approved manner. Any contaminated groundwater encountered would be pumped out of the trench and properly disposed.

Impact: During and after construction, contamination could occur such that downstream aquatic habitats are substantially altered.(Class II)

Performance Criteria, Violation Level, and Timing:

- PC1 Prior to dewatering of the trench, bore pits, or other pipeline excavations, water shall be tested for contamination in accordance with DTSC approved procedures defined in the Construction Contingency Plan **(Level 2) - During construction**
- PC2 Water pumped from the trench, bore pits, or other pipeline excavations during a dewatering procedure shall not be released into the environment until test results indicate the water is at a quality greater than the standards set for partial body contact by the State Water Quality Control Board. **(Level 2) - During construction**
- PC3 Water found to be contaminated during the dewatering of the trench bore pits, or other pipeline excavations shall be disposed of in sealed containers and transported to a facility that will accept that contaminant source for permanent storage or treatment. **(Level 3) - During construction**
- PC4 Transport manifests for water found to be contaminated during dewatering of the trench, bore pits, or other pipeline excavations shall be made available for inspection. **(Level 2) - During construction**

Effectiveness Criteria: Containment of waterways with degraded groundwater within ROW.

Effectiveness Timing: During and after construction

Applicant-Proposed Measure H-7*: Water crossing construction will occur in the dry season (normally May through October) [Note: does not apply to bored crossings]

Applicant-Proposed Measure H-8*: SFPP will use standard pipeline stream-crossing techniques including Best Management Practices for storm water during construction. [Note: not applicable because no stream crossings will be open cut]

Applicant-Proposed Measure H-9*: To reduce likelihood of accidental spills, refueling and lubrication of construction equipment will be completed by refueling and lubrication activities with fuel tanks, fuel lines and the equipment having been placed in protective systems involving temporary berms and liners (e.g., hay bales and PVC plastic sheets). If accidental spills do occur, they will be quickly cleaned up using appropriate techniques and equipment.

Impact: During and after construction, spills could occur such that downstream aquatic habitats are substantially altered. (Class II)

Performance Criteria, Violation Level, and Timing:

- PC1 All refueling and lubrication of construction equipment will occur in protected sites. **(Level 2) - During construction**
- PC2 Refueling and lubrication systems (fuel tanks, fuel lines, etc.) shall be enclosed in protective systems. **(Level 2) - During construction**
- PC3 All spills and leaks shall be removed using appropriate techniques (e.g., excavation, absorbents, vacuum) immediately (i.e., before close of business the day the spill/leak) and materials disposed of properly. **(Level 3) - During construction**

Effectiveness Criteria: Containment of contamination within ROW.

Effectiveness Timing: During and after construction

Applicant-Proposed Measure H-10*: Pipe welding, coating and similar work will not be completed within water courses.

[Note: not applicable since no construction will occur within water courses]

Applicant Proposed Measure H-11*: At Compton Creek, the pipe will be buried a minimum of four feet below the 100-year scour depth of the stream channel. (see Mitigation Measure H-4)

LAND USE AND RECREATION MITIGATION MEASURES

Mitigation Measure L-1: The Applicant shall give ample advance notice (at least 14 days) to potentially affected property owners and tenants prior to construction of the pipeline. Notice shall be provided by: 1) mailing notices to properties within 300 feet of the ROW; 2) posting bulletins in neighborhoods that could be affected; and 3) placing notices in local newspapers.

Impact: Short-term disruption or inconvenience to residents adjacent to the pipeline ROW during construction (Class III).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP provides verification of when and how notices were mailed, published, and posted. **(Level 1)- At least 14 days prior to start of construction.**
- PC2 SFPP provides copies of notices to CPUC designee; notice to be approved by Technical Reviewer prior to distribution. **(Level 1) - At least 30 days prior to start of construction**

Effectiveness Criteria: Verification of notices sent. Affected property owners should be aware of construction times and schedules and have had the opportunity to make or have SFPP make alternative access provisions during construction. If multiple complaints of "no notice" are received, then additional noticing as determined by Technical

Reviewer will be required.

Effectiveness Timing: Prior to and during construction.

Mitigation Measure L-2: The Applicant shall notify residents at least two weeks in advance of lane closures where access to residential areas may be restricted, and develop alternative transportation routes. SFPP shall restore restricted vehicle access to residential areas and individual homes at the end of each work day, while maintaining access controls necessary to preserve public safety in accordance with approved Traffic Control Plans.

Impact: Short-term disruption or inconvenience to residents adjacent to the pipeline ROW during construction (Class III).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP provides copies of notices to CPUC designee; notice to be approved by Technical Reviewer prior to distribution. **(Level 1) - Alternative routes/access to be provided to CPUC designee at least 30 days prior to start of construction.**
- PC2 SFPP provides verification of when and how notices were mailed, published, and posted. **(Level 1) - Notices provided to residents at least 14 days prior to construction.**
- PC3 Normal access to residential areas is restored at the end of the each work day and throughout weekends. **(Level 3) - During construction**
- PC4 SFPP develops and implements alternate transportation routes where access to residential areas is restricted. **(Level 2) - During construction**

Effectiveness Criteria: Verification that notices sent and that alternative transportation routes/access are maintained during construction and that normal or regular access routes are restored at the end of each work day and throughout weekends.

Effectiveness Timing: Prior to and during construction.

Mitigation Measure L-3: The Applicant shall use a public liaison/contact person before, during, and after construction through residential areas as the single-point contact and interface between residents and construction crews. One contact person per spread shall be provided and shall be available both in person and by phone for up to one year after construction.

Impact: Short-term disruption or inconvenience to residents adjacent to the pipeline ROW during construction (Class III).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP to identify contact person name, location, phone number, and responsibilities for each spread 30 days prior to construction. Contact persons to be available 30 days prior to construction. Information regarding contact persons to be provided in notices required in L-1 and L-2. **(Level 1) - Prior to start of construction, during construction, and up to one year after construction.**
- PC2 Contact person is available both in person and by phone. **(Level 1) - Prior to, during and post-construction**
- PC3 Each contact person is responsible for only one construction spread. **(Level 1) - During construction**

Effectiveness Criteria: Verification that contact persons are available as required in person and by phone and have sufficient information regarding construction timing, techniques, and alternative transportation routes to adequately interface with the public.

Effectiveness Timing: Prior to, during, and up to one year after construction.

Mitigation Measure L-4: The Applicant shall schedule construction to avoid peak use periods (weekends and holidays) at recreational parks and peak use times/seasons of the adjacent baseball field. The Applicant shall provide onsite notification of recreational access closures at least two weeks in advance, through the posting of signs and/or notices.

Impact: Short-term disturbance to recreational users during pipeline construction (Class III).

Performance Criteria, Violation Level, and Timing:

- PC1 Construction activities do not occur during peak use periods (weekends and Federal and State holidays) at recreational parks, if the timing is compatible with biological mitigation measures (biological measure requirements take precedence). **(Level 2) - During construction**
- PC2 Construction activities do not occur adjacent to baseball fields during peak use times/seasons. **(Level 2) - During construction**
- PC3 If need to construct during summer months, SFPP provides to CPUC designee and park and recreation administrators construction schedule for ROW adjacent to each recreational park/area. **(Level 1) - 60 days prior to start of construction near each recreational park/area**
- PC4 SFPP provides notices to park and recreational area administrators regarding all construction schedules at least 30 days in advance of construction activities. **(Level 2) - 30 days prior to start of construction near each recreational park/area**
- PC5 SFPP posts notices at recreational areas at least 14 days prior to construction, providing information on restricted access, alternate routes, expected duration of construction activities, and toll-free contact phone number. **(Level 2) - 14 days prior to start of construction near each recreational park/area**

Effectiveness Criteria: Verification that access to recreational areas is maintained during summer months; that construction does not cause traffic congestion during summer months; and that construction does not occur on weekends or holidays.

Effectiveness Timing: Prior to and during construction.

Mitigation Measure L-5: The Applicant shall limit construction hours where construction is located adjacent to a school. Limitations shall be based on hours of school operation, time of year, and acoustical factors. If construction cannot be avoided during school hours, the Applicant shall contact affected schools prior to the start of project construction and verify daily school schedules. Construction shall be avoided adjacent to schools during hours of high activity (as defined by school administration).

Impact: Short-term disturbance to sensitive land uses resulting from pipeline construction (Class II).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP submits a list of all schools within 300 feet of centerline of right-of-way. **(Level 1) - Prior to construction**
- PC2 SFPP provides verification that schools have been contacted to identify daily school schedules. **(Level 1) - Prior to start of construction near each school**
- PC3 SFPP provides plan detailing limits that will be imposed on construction activity adjacent to schools based on hours of school operation, time of year, and acoustical factors. **(Level 2) - Prior to start of construction near each school**
- PC4 Construction does not occur adjacent to schools during hours of significant school activity (drop off and pick up hours, lunch, other specific times requested by each school). **(Level 3) - During construction near each**

- school**
PC5 SFPP provides report detailing hours of high activity as defined by the administrator of each school. **(Level 2) - Prior to start of construction near each school**

Effectiveness Criteria: Student activities are not disrupted or pre-empted by construction activities. Complaints by the school(s) would indicate non-compliance or non-effectiveness. In the event of such complaints, SFPP may be required to adjust construction schedules.

Effectiveness Timing: Prior to start of construction and during construction.

Mitigation Measure L-6 deleted

Mitigation Measure L-7: The Applicant shall coordinate with affected agencies and proponents of proposed projects within or adjacent to the ROW to minimize cumulative construction effects and avoid preclusion of other planned land uses to the maximum extent feasible. Said coordination shall take place during the final design and permitting stages of the pipeline project and shall include, but not be limited to:

- Provision of pipeline route and construction schedule to affected parties
- Coordination of construction activities with other construction projects
- Coordination of utility disruptions and road or lane closures.

Impact: Cumulative impacts of pipeline construction with other construction projects could affect adjacent land uses (Class III).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP provides documentation that coordination with agencies along pipeline route has taken place and that potential cumulative construction effects and impacts have been identified and mapped. **(Level 1) - Prior to construction.**
- PC2 SFPP provides documentation that the pipeline route and construction schedules have been provided to affected agencies and proponents of proposed projects. **(Level 1) - Prior to construction.**
- PC3 SFPP provides documentation of coordination of construction activities (e.g., utility disruptions, road closures, and construction vehicle access) with other construction projects in the immediate vicinity. **(Level 2) - Prior to and during construction.**

Effectiveness Criteria: Verification that other construction projects are not precluded by the pipeline project and that cumulative effects (noise, dust, impeded access, utility disruptions) are avoided.

Effectiveness Timing: Prior to start of and during construction

Applicant-Proposed Measure L-9*: Give ample advance notice to potentially affected property owners and tenants (including religious, scientific, and other sensitive land uses) prior to construction of the pipeline. Notices will be provided by: 1) mailing notices to properties within 300 feet of the ROW, and 2) posting bulletins in neighborhoods that could be affected.(see Mitigation Measure L-1)

Applicant-Proposed Measure L-10*: Notify residents at least two weeks in advance of lane closures where access to residential areas may be restricted, and develop alternative transportation routes. Further, measures will be taken to ensure that normal access to residential areas is restored, where feasible, at the end of the work day and throughout weekends.(see Mitigation Measure L-2).

Applicant-Proposed Measure L-11*: Use a public liaison/contact person before, during, and after construction through residential areas as the single-point contact and interface between residents and the construction crew.(see Mitigation Measure L-3)

Applicant-Proposed Measure L-12*: Schedule construction to avoid peak use periods (weekends and holidays) at recreational parks. Provide onsite notification of recreational access closures at least two weeks in advance, through the posting of signs and/or notices.(see Mitigation Measure L-4)

Applicant-Proposed Measure L-13*: Schedule construction hours where construction is located adjacent to a school on a case-by-case basis.(see Mitigation Measure L-5)

NOISE MITIGATION MEASURES

Mitigation Measure N-1: Conduct all construction activities involving motorized equipment between the hours of 7 a.m. and 7 p.m. Monday through Saturday, or for a shorter period if so stipulated in the applicable noise ordinance or as approved by the local jurisdiction. Further restrict construction to outside school hours where schools are located adjacent to the ROW and would be impacted by construction noise, unless school district officials give written approval. Incorporate these restrictions in all construction plans and scheduling prior to construction. Compliance during planning and construction is to be monitored by the city/county agency that enforces the noise ordinance, by the Public Works Department, or by a CPUC-approved construction monitor. This measure will be overridden by Mitigation Measure T-3 where it conflicts with the provisions therein.

Impact: Noise from construction could disturb adjacent land uses (Class II).

Performance Criteria, Violation Level, and Timing:

- PC1 All construction activities occur between 7 a.m. and 7 p.m. Monday through Saturday (or for a shorter period if stipulated by applicable noise ordinance, or as approved in writing by the local jurisdiction). No construction activities may occur on Sunday. **(Level 2) - During construction.**
- PC2 Construction activities occur outside school hours when schools are located within 300 feet of centerline of the right-of-way of the construction area, or as approved in writing by the school district officials. **(Level 2) - During construction.**
- PC3 SFPP provides copies of noise ordinances and documents where each one is applicable. **(Level 2) - Prior to construction.**

Effectiveness Criteria: Verification of construction activities during specified hours will result in impact reduction.

Effectiveness Timing: During construction.

Mitigation Measure N-2: SFPP or its construction contractor shall provide at least 72-hour advance notice of the start of construction to all business and residences adjacent to the ROW (implement with Mitigation Measures L-1 through L-3). Notification shall be by mail with follow up by telephone or in person. The announcement shall state specifically where and when construction will occur in the area. If construction delays of more than seven days occur, an additional contact shall be made, either in person or by mail. Notices shall provide tips on reducing noise intrusion, for example, by closing windows facing the planned construction. The noticing shall also advise the recipient on how to inform the Applicant/contractor if specific outdoor events are scheduled so that construction can be rescheduled, if necessary, to avoid a conflict. A reasonable deadline for notification shall be stated. Compliance is to be monitored by a CPUC-approved construction monitor.

Impact: Noise from construction could disturb adjacent land uses (Class II).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP provides CPUC with a copy of the advance notice for review and approval. **(Level 1) - Two weeks prior to initiating construction within the area of concern.**
- PC2 SFPP provides CPUC with documentation of mailing a 72-hour advance notice to all businesses and residents and documents attempts at in person or telephone follow up. **(Level 2) - Mailed at least 5 days prior to construction in the area of concern.**
- PC3 SFPP assigns monitor to ensure compliance with this mitigation measure. **(Level 1) - Monitor assigned prior to start of construction and ensures compliance during construction.**
- PC4 Schools on the sensitive receptor list will include those that fall within 300 feet of the centerline of the construction ROW (unless SFPP can demonstrate through noise modeling, that no significant impact would result at any school within that range). - **(Level 1) - Three weeks prior to initiating construction within the area of concern.**

Effectiveness Criteria: Verification of the appropriate sensitive receptor locations, and review of the notice-letter. Notifying the appropriate receptors will result in an impact reduction.

Effectiveness Timing: Prior to and during construction

Mitigation Measure N-4: SFPP or its contractor shall maintain proper mufflers on all internal combustion and vehicles engines used in construction to reduce noise to the maximum feasible extent. SFPP or its contractor shall maintain written certification of muffler condition and make it available upon request to CPUC-approved construction monitor.

Impact: Noise from construction could disturb adjacent land uses (Class II).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP provides a certification (signed and dated) from a third-party independent Certified Mechanic that the muffler installed on each applicable machine/vehicle is proper and maintained. The identification number for each machine/vehicle must be listed on the certification form, as well as on the outside (in plain view) of each machine/vehicle. **(Level 2) - Prior to construction.**
- PC2 SFPP monitors conduct and document periodic checks of the equipment and construction activities periodically over the complete construction schedule to ensure that noise levels are reduced by properly functioning mufflers. **(Level 2) - During construction.**

Effectiveness Criteria: Verification of the operational functionality of the mufflers will result in an impact reduction.

Effectiveness Timing: Before and during construction.

Mitigation Measure N-5: To reduce offsite noise levels at the residences adjacent to the Norwalk Station, the following measures shall be implemented for all construction within the station:

- Internal-combustion engine-powered equipment, whether mobile or stationary, will be equipped with and use enclosures, noise shields, shrouds, or other noise reduction features.
- Portable noise shields (3/4 or 1-inch thick plywood with fiberglass facing) shall be available and used to shield noise from noise-producing equipment that does not have integral shrouds or noise-reducing enclosures.
- Trenching within the Station shall be completed with hand-digging techniques unless otherwise approved by the CPUC Environmental Monitor after assessment of technical feasibility and noise impacts.
- All residents living adjacent to the Station construction (i.e., all residents living in the properties on the north side of Cheshire Street between Norwalk Boulevard and Madris Avenue, or those at the north end of Thornlake) shall be informed of the construction to occur within the Station in accordance with Mitigation Measure N-2. These residents shall be informed that if they have special needs for quiet during the day, they may call SFPP's toll-free

telephone number to arrange for alternative temporary housing for up to 2 days when construction activities are near their homes.

Impact: Temporary construction noise would impact the residences south of the Norwalk Station (Class II).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP ensures use of enclosures, noise shields, shrouds, or other noise reduction features to ensure that offsite noise levels at the residences adjacent to the Norwalk Station are reduced. **(Level 2) - During construction.**
- PC2 Trenching within the station shall be completed using hand-digging techniques unless otherwise approved in writing by the CPUC Environmental Monitor. **(Level 2) - During construction.**
- PC3 SFPP to provide CPUC with a copy of the notice provided to all residents living adjacent to the Station construction. The notice shall describe the construction to occur within the Station, and that there is a toll-free telephone number, and that if special needs exist, SFPP can make arrangements for alternative temporary housing for up to 2 days when construction activities are near their homes. **(Level 1) - During construction.**

Effectiveness Criteria: Verification of the operational functionality of the enclosures, noise shields, shrouds, or other noise reduction features will result in an impact reduction.

Effectiveness Timing: Before and during construction.

Applicant Proposed Measure N-6*: All noise-producing project equipment and vehicles using internal combustion engines will be equipped with mufflers, and air-inlet silencers where appropriate, in good operating condition that meets or exceeds original factory specification. Mobile or fixed “package” equipment (e.g., arc-welders, air compressors) will be equipped with shrouds and noise control features that are readily available for that type of equipment (see Mitigation Measure N-4).

Applicant Proposed Measure N-7*: All mobile or fixed noise-producing equipment used on the project, which is regulated for noise output by a local, state, or federal agency, will comply with such regulation while in the course of project activity (see Mitigation Measure N-1).

Applicant Proposed Measure N-8*: All project personnel who could potentially be exposed to sound levels in excess of 85 dBA will be provided with personal protective equipment in accord with Occupational Safety and Health Administration (OSHA) regulations and guidelines.

Impact: Impact on project personnel (Class II or III).

Performance Criteria, Violation Level, and Timing:

- PC1 All project personnel are issued personal protective equipment (earplugs) suitable for protection at noise levels in excess of 85 dBA.

Effectiveness Criteria: CPUC verification that project personnel utilize personal protection equipment will result in an impact reduction.

Effectiveness Timing: During construction.

Applicant Proposed Measure N-9*: Construction zones where noise levels are expected to exceed 85 dBA will be delineated by hazard tape, cones, temporary construction fencing or other effective means and identified by temporary signage as a “noise hazard” area to preclude hearing damage to non-project-related persons including members of the

general public.

Impact: Impact on non-project-related persons (Class II or III).

Performance Criteria, Violation Level, and Timing:

PC1 Construction zones where noise levels are expected to exceed 85 dBA will be delineated by hazard tape, cones, temporary construction fencing or other effective means. **(Level 2) - During construction.**

Effectiveness Criteria: CPUC verification that construction zones that exceed 85 dBA are delineated will result in an impact reduction.

Effectiveness Timing: During construction.

Applicant Proposed Measure N-10*: Material stockpiles and mobile equipment staging, parking, and maintenance areas will be located as far as practicable from noise-sensitive receptors.

Impact: Impact on noise-sensitive receptors (Class II or III).

Performance Criteria, Violation Level, and Timing:

PC1 Material stockpiles and mobile equipment staging, parking, and maintenance areas are located as far as practicable from noise-sensitive receptors. **(Level 2) - During construction.**

Effectiveness Criteria: CPUC verification that material stockpiles and mobile equipment staging, parking, and maintenance areas are located as far as practicable from noise-sensitive receptors will result in an impact reduction.

Effectiveness Timing: During construction.

Applicant Proposed Measure N-11*: The hours of construction including noisy maintenance activities and all spoils and material transport will be restricted to the periods and days permitted by the local noise or other applicable ordinance (see Mitigation Measure N-1).

Applicant Proposed Measure N-12*: The use of noise-producing signals, including horns, whistles, alarms, and bells will be for safety warning purposes only.

Impact: Impact on noise-sensitive receptors (Class II or III).

Performance Criteria, Violation Level, and Timing:

PC1 Noise-producing signals, including horns, whistles, alarms, and bells are for safety warning purposes only. **(Level 2) - During construction.**

Effectiveness Criteria: CPUC verification that use of noise-producing signals, including horns, whistles, alarms, and bells will be for safety warning purposes only will result in an impact reduction.

Effectiveness Timing: During construction.

Applicant Proposed Measure N-13*: No project-related public address loudspeaker, two-way radio, or music system will be audible at any adjacent noise-sensitive receptor.

Impact: Impact on noise-sensitive receptors (Class II or III).

Performance Criteria, Violation Level, and Timing:

PC1 No Project-related public address loudspeaker, two-way radio, or music system will be audible at any adjacent noise-sensitive receptor. **(Level 2) - During construction.**

Effectiveness Criteria: CPUC verification that no project-related public address loudspeaker, two-way radio, or music system will be audible at any adjacent noise-sensitive receptor.

Effectiveness Timing: During construction.

Applicant Proposed Measure N-14*: The on-site construction superintendent will have the responsibility and authority to receive and resolve noise complaints. A clear appeal process to SFPP will be established prior to construction commencement that will allow for resolution of noise problems that cannot be immediately solved by the site supervisor. [This measure is overridden by Mitigation Measure N-3, which establishes a toll-free telephone number for questions and complaints during construction.]

Applicant Proposed Measure N-15*: The emplacement of berms or erection of temporary sound wall barriers will be considered where project activity is unavoidably close to noise-sensitive receptors.

Impact: Impact on noise-sensitive receptors (Class II or III).

Performance Criteria, Violation Level, and Timing:

PC1 SFPP document that berms or erection of temporary sound wall barriers will be considered where project activity is unavoidably close to noise-sensitive receptors. **(Level 2) - During construction.**

Effectiveness Criteria: CPUC verification that berms or erection of temporary sound wall barriers are considered where project activity is unavoidably close to noise-sensitive receptors.

Effectiveness Timing: During construction.

SOCIOECONOMICS, PUBLIC SERVICES, AND UTILITIES MITIGATION MEASURES

Applicant-Proposed Measure S-7*: [Deleted]

Applicant-Proposed Measure S-8*: Make arrangements to move uncontaminated rock and soil to sites that need these materials for fill, rather than to landfills.

Impact: Solid waste generated by construction could reduce available landfill space (Class III).

Performance Criteria, Violation Level, and Timing:

PC1 SFPP provides documentation that uncontaminated rock and soil are used for fill. **(Level 2) - During construction**

Effectiveness Criteria: Reduction in the amount of construction debris taken to a landfill.

Effectiveness Timing: During construction

SYSTEM SAFETY AND RISK OF UPSET MITIGATION MEASURES

Mitigation Measure SS-1: SFPP shall provide structural support for underground utilities in and near the construction area during work in the trench and backfilling operations to prevent damage to such facilities during construction activities.

Impact: The pipeline could damage existing underground utilities (Class I).

Performance Criteria, Violation Level, and Timing:

- PC1 Structural support shall be provided if any damage is expected (if a sag deflection of 2 inches is expected or observed, support shall be provided). **(Level 3) - During construction.**
- PC2 A list of utilities and their locations for which support is expected to be provided shall be submitted to CPUC monitors 7 days before that particular activity is conducted **(Level 2) - During construction.**
- PC3 SFPP shall inspect the construction activities to identify any unacceptable sag deflection **(Level 1) - During construction.**

Effectiveness Criteria: No damage during construction to utilities in and near the construction area

Effectiveness Timing: During project construction

Mitigation Measure SS-2: SFPP shall coordinate with utility companies and use hand tools (i.e., non-motor operated equipment) in utility intensive areas and within 24 inches of underground structures. Any soil remediation or excavation work in the vicinity of the pipeline shall also require the use of hand tools within 24 inches of the pipeline.

Impact: The pipeline could damage existing underground utilities (Class I).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP includes other utilities on construction alignment sheets or submits a list of locations with intensive utility lines (more than 2) and expected to be worked on in a close proximity (equal or less than 24 inches) to CPUC monitors 7 days before starting of construction activities in a particular location. **(Level 2) - During construction.**
- PC2 Contractor shall sign a memo that they are aware of this requirement and use of hand tools in identified locations (to be kept at site by SFPP) **(Level 3) - During construction.**
- PC3 SFPP shall provide for inspection a copy of all requests made to USA and the ticket numbers. **(Level 1) - During construction**
- PC4 Excavation shall be such that the curvature of the subsurface structure is exposed before power-operated equipment may be used. **(Level 3) - During construction**
- PC5 If USA markings are faded or obliterated (no longer reasonably visible), SFPP shall ensure that USA is notified and asked to re-mark the area. **(Level 3) - During construction**
- PC6 All USA-marked lines shall be hand-excavated. USA should have records of, and mark, subsurface lines that are abandoned, out-of-service, or not-in-service. USA markings should be within two feet on either side of the exterior surface of the subsurface installation (for a total of four feet plus the diameter of the subsurface utility). If the contractor hand-excavates this width and to the depth of the trench, reasonable effort has taken place. **(Level 3) - During construction**

Effectiveness Criteria: No damage during construction to utilities in and near the construction areas

Effectiveness Timing: During project construction

Mitigation Measure SS-3: SFPP shall halt work in the immediate vicinity in the event of inadvertent damage to an

underground utility, until the owner of the utility has been contacted and repairs have been completed.

Impact: The pipeline could damage existing underground utilities (Class I).

Performance Criteria, Violation Level, and Timing:

- PC1 The owner of the damaged utility shall be notified within 10 minutes of damage. **(Level 2) - During construction.**
- PC2 Work shall be halted immediately in the vicinity of any damaged pipeline, while damage is evaluated. The owner shall be notified and repairs completed as instructed or necessary. **(Level 3) - During construction.**
- PC3 A notification log indicating phone number called, time called, and person notified shall be kept on site and available for inspection. **(Level 1) - During construction**

Effectiveness Criteria: Timely repairs of accidental damages and cooperative relationship with utility owners

Effectiveness Timing: During Project Construction

Mitigation Measure SS-4: SFPP shall have an electrical contractor on-call at all times during construction near the potentially affected facility to repair any circuits if required by the owner in the event they are damaged during construction. The appropriate response to hazards associated with damage to natural gas pipelines will be determined in consultation with natural gas utility operators and local fire departments. Local fire departments shall be notified of the schedule for construction activities in the vicinity of natural gas and other pipelines.

Impact: The pipeline could damage existing underground utilities (Class I).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP shall provide documentation stating that a registered electrical contractor will be available on an on-call basis at all times during construction **(Level 2) - Prior to construction.**
- PC2 SFPP shall notify all appropriate Fire Departments of the construction schedule in the vicinity of oil and gas pipelines 14 days before the construction day. Copy of the notification shall be send to CPUC. In the event of an accident associated with these oil and gas lines the owners and fire department shall be notified within 10 minutes of the occurrence of the accident **(Level 3) - During construction.**

Effectiveness Criteria: Damage to utilities prevented. Rapid respond to accidents. Cooperative relationship with the utilities and the fire Department before and after any accident involving oil and gas pipelines

Effectiveness Timing: During Project Construction particularly after an accident which involves any oil and gas pipelines.

Applicant Proposed Measure SS-36*: All field welding would be performed by qualified welders to the specifications of, and in accordance with, all applicable State and municipal ordinances, rules, and regulations, and in accordance with SFPP certified welding procedures, API 1104 and the rules and regulations of the U.S. Department of Transportation.

Impact: Accidental release of petroleum products as a result of welding failures

Performance Criteria, Violation Level, and Timing:

- PC1 The qualifications of the welders to be maintained in files and available for inspection by agencies. All required rules, regulations, standards, ordinances shall be specified in the contract **(Level 1) - During construction**

Effectiveness Criteria: Welding are completed in compliance with all required rules, regulations, standards, ordinances as specified in PC1

Effectiveness Timing: Preconstruction and construction

Applicant Proposed Measure SS-37*: Every single pipeline weld would be radiographically (i.e., X-ray) inspected by a third-party licensed technician and reviewed by a certified company inspector. Radiographs would be recorded and interpreted for acceptability according to requirements of API 1104. All rejected welds would be repaired or replaced, as necessary, and re-radiographed until compliance is achieved. The X-ray reports, as well as a record indicating the location of welds, would be kept for the life of the project.

Impact: Accidental release of petroleum products as a result of welding failures

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP shall have available for inspection a copy of the qualifications of the third party welding inspection company and their qualifications/certification **(Level 1) - Prior to construction.**
- PC2 SFPP shall conduct radiographic inspection of every weld according to API 1104 and other applicable rules and standards. **(Level 3) - During construction**
- PC3 All unacceptable welds shall be rejected and replaced with acceptable welds that have been re-inspected. **(Level 3) - During construction**
- PC4 SFPP shall prepare a report indicating the locations with rejected and replaced welds and other pertinent inspection information. The reports shall be kept on site and available for inspection. **(Level 2) - During construction**

Effectiveness Criteria: Every single weld is properly examined, the non-complied welds are repaired or replaced and re-inspected, and the records are kept and available for external audits by agencies.

Effectiveness Timing: Pre-construction, construction, operation

Applicant Proposed Measure SS-38*: State-of-the-art metallurgical specifications for pipe (API 5LX-X60-grade pipe, 0.312 pipeline wall thickness) would be used.

Impact: Accidental release of petroleum products as a result of pipeline failures.

Performance Criteria, Violation Level, and Timing:

- PC1 30 days before construction SFPP shall submit copies of the pipeline purchase order that identifies the ordered pipeline specifications to the CPUC. **(Level 3) - During construction.**
- PC2 The construction plans shall identify the grade and wall thickness of all pipe used. **(Level 2) - Prior to construction**
- PC3 CPUC designee shall conduct spot checks and manually measure the pipeline thickness. **(Level 3) - During construction.**
- PC4 Pipe used shall be equal to or greater than API 5LX-X60 grade and 0.312 wall thickness. **(Level 3) - During construction**

Effectiveness Criteria: The pipeline installed complies with the required grade and wall thickness.

Effectiveness Timing: During Construction

Applicant Proposed Measure SS-39*: Installation of a prominently-colored plastic strip in the backfill, warning

excavators that a pipeline lies below.

Impact: Impacts associated with accidental release of petroleum products as a result of pipeline damages.

Performance Criteria, Violation Level, and Timing:

PC1 Install the plastic strip in the backfill at approximately 18 inches below the surface level in all areas where there is open trench (impossible for bored or directionally drilled areas). **(Level 2) - During construction.**

Effectiveness Criteria: The strip is installed at all backfilled locations

Effectiveness Timing: Construction

Applicant Proposed Measure SS-40*: Hydrostatic testing would be performed after construction and prior to startup. Periodic testing would also be conducted as required by the California Pipeline Safety Act and the California Fire Marshal.

Impact: Impacts associated with accidental releases of petroleum products

Performance Criteria, Violation Level, and Timing:

PC1 Hydrostatic test of pipeline is conducted according to the U.S. DOT and CSFM requirements **(Level 3) - Prior to operation.**

Effectiveness Criteria: Hydrostatic testing is conducted properly and any deflection is documented and repaired to U.S DOT/CSFM satisfaction

Effectiveness Timing: Pre-operation

TRANSPORTATION AND TRAFFIC MITIGATION MEASURES

Mitigation Measure T-1: SFPP shall restrict all necessary lane closures or obstructions on major roadways to off-peak period in urbanized areas to mitigate traffic congestion and delays which would be caused by lane closures during construction and by exploratory excavations. Lane closures must not occur between 6:00 and 9:30 a.m. and between 3:30 and 6:30 p.m., or as directed in writing by the affected public agency. Alternatively, SFPP shall consider nighttime construction in areas where no residences are located within 500 feet, and where traffic impacts could be reduced by avoidance of daytime construction. SFPP shall have a Traffic Management Plan prepared by a registered Traffic Engineer, describing which traffic lanes would require closure based on the pipeline location within each street, and where night construction is proposed. This plan shall be approved by each affected local jurisdiction and by the CPUC prior to construction and implemented by SFPP.

Impact: Pipeline construction would block traffic lanes, causing traffic congestion and a potential increase in traffic accidents (Class II).

Performance Criteria, Violation Level, and Timing:

PC1 SFPP provides documentation from the affected public agency(ies) (city, county, or Caltrans) indicating that Traffic Management Plans prepared by SFPP for their respective jurisdictions have been reviewed and approved for the proposed pipeline construction activity. **(Level 1) - Prior to construction.**

PC2 SFPP implements all specifications of the approved Traffic Management Plans for the entire pipeline route at all locations where construction activities would interact with the existing transportation system. **(Level 2) - During construction.**

- PC3 Lane closures do not occur between 6:00 a.m. and 9:30 a.m., or 3:30 p.m. and 6:30 p.m., or as directed in writing by the affected public agency. **(Level 2) During construction**
- PC4 For sites that are not included in Traffic Management Plan, the standard guidelines in the Work Area Traffic Control Handbook shall be implemented. **(Level 2) - During construction**

Effectiveness Criteria: If construction activities and lane closures do not result in unreasonable traffic congestion or delays, as determined by the affected public agencies, and if the resulting congestion or blockage does not create more than a five minute delay for motorists (the five minute criteria is subject to modification by the affected public agency).

Effectiveness Timing: Prior to and during construction.

Mitigation Measure T-2: SFPP shall develop and implement detailed Traffic Control Plans (TCPs), prepared by a registered Traffic Engineer, for the entire pipeline route at all locations where construction activities would interact with the existing transportation system. Input and approval from the responsible public agencies shall be obtained; copies of approval letters from each jurisdiction must be provided to the CPUC prior to the start of construction within that jurisdiction. The TCP shall define the use of flaggers, warning signs, lights, barricades, cones, etc. according to standard guidelines outlined in the Caltrans Traffic Manual, the Standard Specifications for Public Works Construction, and the Work Area Traffic Control Handbook (WATCH)

Impact: Pipeline construction would block traffic lanes, causing traffic congestion and a potential increase in traffic accidents (Class II).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP provides a Traffic Control Plan for sites where construction activities would interact with existing transportation systems (bus, rail) and [with] written approval for such plan from the affected public agencies (city, county, or Caltrans). **(Level 1) - Prior to start of construction.**
- PC2 SFPP implements all specifications of the approved TCPs for the entire pipeline route at all locations where construction activities would interact with the existing transportation system. **(Level 2) - During construction.**
- PC3 For sites that are not included in the TCP, the standard guidelines in the Work Area Traffic Control Handbook shall be implemented. **(Level 2) - During construction**

Effectiveness Criteria: If the construction activities do not cause an increase in accident rates on any of the affected facilities, as determined by the affected public and law enforcement agencies.

Effectiveness Timing: Prior to and during construction.

Mitigation Measure T-4: SFPP shall give written notification to all landowners, tenants, business operators, and residents along the ROW of the construction schedule, and shall explain the exact location and duration of the pipeline and construction activities within each street (e.g., which lane/s will be blocked, at what times of day, and on what dates). SFPP shall identify any potential obstructions to their access, and shall make alternative access provisions. The written notification shall include a toll-free telephone number for SFPP's Business Coordinator (see Mitigation Measures S-1 and S-2) and shall encourage affected parties to discuss their concerns with SFPP prior to the start of construction so individual problems and solutions can be identified. Alternative access provisions shall include SFPP-provided signage and alternate parking as provided and approved by local agencies. The notification shall be provided in conjunction with that required in Mitigation Measures L-1 or complete with other pertinent mitigation measures.

Impact: Pipeline construction would restrict access to residences and businesses along the ROW (Class II).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP provides proof of written notification to all affected property owners and tenants prior to blocking access

- to a property. If an alternative access route or alternative parking is to be used, a signed agreement with the owner shall be provided. **(Level 1) - At least three days prior to the blockage.**
- PC2 SFPP posts signage describing alternate parking as provided and approved by the local agencies. **(Level 1) - At least three days prior to construction**
- PC3 SFPP provides alternate parking as provided and approved by the local agencies. **(Level 2) - During construction**
- PC4 SFPP shall provide alternative access if construction-related activities (including equipment and materials) obstruct or block access to a business, residence or other property. **(Level 3) - During construction**

Effectiveness Criteria: If access and parking needs of the adjacent land uses are met.

Effectiveness Timing: Prior to and during construction.

Mitigation Measure T-5: SFPP shall schedule construction on or adjacent to sensitive land uses (hospitals, schools, residences, major employers, recreational areas, etc.) so that at least one access driveway is left unblocked during all business hours or hours of use. This scheduling shall be provided by SFPP to the landowners or tenants so they can inform residents or customers. If access problems can be avoided by scheduling night construction in non-residential areas, this option should be considered (see Mitigation Measure T-1).

Impact: Pipeline construction would restrict access to residences and businesses along the ROW (Class II).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP provides a written record indicating hours and dates of operation and acceptable blockage times for any critical land uses whose access would be completely blocked; i.e., at hospitals, schools, major employers (25 or more employees), recreational areas, or large parking lots. **(Level 2) - 30 days prior to start of construction on or adjacent to critical land uses.**
- PC2 SFPP to schedule night construction in non-residential areas if day-time access problems can not be avoided **(Level 2) - 30 days prior to start of construction on or adjacent to critical land uses.**

Effectiveness Criteria: If access and parking needs of the adjacent land uses are met

Effectiveness Timing: During construction.

Mitigation Measure T-6: SFPP shall provide alternative pedestrian/bicycle access routes to avoid obstruction to pedestrian/bicycle circulation. Where existing pedestrian circulation routes or bike trails would be obstructed by pipeline construction, alternative access routes shall be developed and signed/marked appropriately, in conjunction with local agencies.

Impact: Pipeline construction could disrupt pedestrian/ bicycle traffic or cause increased accidents (Class II).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP maintains pedestrian/bicycle circulation through or around the construction zone using routes that are adequately signed and marked (as described in the Work Area Traffic Control Handbook) when any construction activity blocks a public sidewalk, marked pedestrian path, or designated bicycle route. **(Level 3) - During construction.**

Effectiveness Criteria: If construction activities do not totally block or unreasonably impair pedestrian movements or safety, as determined by the affected public agencies.

Effectiveness Timing: During construction

Mitigation Measure T-7: SFPP shall coordinate in advance with emergency service providers to avoid restricting movements of emergency vehicles. Police departments, fire departments, ambulance services, and paramedic services shall be notified in advance by SFPP of the proposed locations, nature, timing, and duration of any construction activities and advised of any access restrictions that could impact their effectiveness. At locations where access to nearby property is blocked, provision shall be ready at all times to accommodate emergency vehicles, such as plating over excavations, short detours, and alternate routes in conjunction with local agencies. The Traffic Control Plans (Mitigation Measure T-2) shall include details regarding emergency services coordination and procedures, and copies shall be provided to all relevant service providers. Documentation of coordination with service providers shall be provided to the CPUC prior to the start of construction.

Impact: Emergency response vehicles could be blocked or impeded by pipeline construction activities (Class II).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP provides documentation of coordination with and approval regarding emergency access from all affected emergency service providers (fire, police, paramedics, and ambulance services) where construction would occur in the public right-of-way within the service area of each emergency service provider. **(Level 1) - 14 days prior to start of construction in each service area.**
- PC2 SFPP has provisions ready at all times for providing immediate emergency access to a property or an area cut off by construction for each affected location (i.e., plating that can be positioned over the excavation, short detours, or alternate access routes). **(Level 3) - During construction**

Effectiveness Criteria: If the construction activities do not totally preclude access to any area emergency vehicles.

Effectiveness Timing: Prior to and during construction.

Mitigation Measure T-8: SFPP shall submit the location of proposed staging area(s) to the CPUC and to appropriate local jurisdictions for review and approval. SFPP shall state the size of the area, the purpose (e.g., storage of construction equipment and employee parking), the number of vehicles and pieces of equipment to be stored, and the duration (in number of days and number of hours per day) that each staging area will be used.

Impact: Potential for traffic congestion and safety problems at and near staging area locations (Class II, Class III).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP provides documentation that all proposed staging areas have been reviewed and approved by the CPUC and local jurisdictions. **(Level 1) - 3 days prior to use of staging areas**
- PC2 Use and size of staging area is limited to the description included in the approved proposal. **(Level 2) - During construction**

Effectiveness Criteria: Proper planning of staging areas would not significantly increase traffic congestion.

Effectiveness Timing: Prior to and during construction.

Mitigation Measure T-9: SFPP shall provide a shuttle bus service for construction workers from convenient off-street parking areas to the work sites to minimize traffic volumes and parking demand at the work sites. Sufficient off-street parking shall be provided at the bus service staging areas so that adjacent or nearby parking facilities are not adversely affected. Multiple staging areas shall be utilized, if necessary, to reduce traffic impacts on the roadways serving the staging areas. A plan for use of shuttle buses and parking areas shall be submitted to the CPUC and to the affected local jurisdictions for review and written approval.

Impact: Construction could result in increased traffic volumes and parking demand (Class II, Class III).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP provides a shuttle bus service for construction workers from convenient off-street parking areas to the work sites. **(Level 2) - During construction**
- PC2 SFPP provides sufficient off-street parking at the bus service staging areas so that adjacent or nearby parking facilities are not adversely affected. **(Level 2) - During construction**
- PC3 Multiple bus service staging areas are utilized, if necessary, to reduce traffic impacts on the roadways serving the bus service staging areas. **(Level 2) - During construction**
- PC4 SFPP provides written approval from the affected local jurisdictions for the bus service staging areas. **(Level 1) - Prior to construction**
- PC5 SFPP provides a drawing and/or written description of each bus service staging area. **(Level 1) - Prior to construction**

Effectiveness Criteria: If construction traffic and parking demand do not create a significant traffic impact on public streets, and if it is observed on a weekly basis that at least 75 percent of the construction workers' vehicles are parked at the staging area; i.e., the number of private vehicles parked at the staging area(s) divided by the total number of private vehicles parked at the staging area(s) and the total number of private vehicles parked at the construction site(s) is at least 0.75.

Effectiveness Timing: Prior to and during construction.

Mitigation Measure T-10: SFPP shall provide an off-street area for the storage of construction equipment, vehicles, and materials to address the increased demand for construction equipment storage. This storage space shall be approved by the CPUC and the affected jurisdiction in writing prior to the start of construction.

Impact: Parking of construction equipment on public roadways could limit available parking (Class III)

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP provides copies of written approval from each affected jurisdiction where there will be off-street equipment, vehicle, and/or material storage. **(Level 1) - 3 days prior to use of off-street site**
- PC2 Only approved off-street sites are used for equipment, vehicle, and/or material storage. **(Level 2) - Prior to, during, and post construction**

Effectiveness Criteria: If all construction equipment is stored outside the public ROW or within the protected construction zone adjacent to an active construction site. This measure is implemented properly if the storage areas are large enough to accommodate the construction equipment, vehicles, and materials and if there are no significant parking impacts associated with equipment storage in the vicinity of the construction zones and storage areas.

Effectiveness Timing: Prior to, during, and post construction.

Mitigation Measure T-11: SFPP shall ease the temporary loss of parking spaces through advance notification and temporary replacement of parking spaces. Where the construction activities would eliminate existing parking spaces, SFPP shall post signs (at least 72 hours prior to construction in the area) in conjunction with local agencies and provide written notification to nearby businesses/residents. If the loss of parking spaces would create a hardship (as determined by the affected public agencies), alternative spaces shall be arranged by SFPP, if feasible, and appropriate guide signs installed.

Impact: Parking of construction equipment on public roadways could limit available parking (Class III).

Performance Criteria, Violation Level, and Timing:

- PC1 Where the construction activities eliminate existing parking spaces, SFPP provides proof of advance (at least 72 hours) notice to affected residents, businesses, and public agencies. (See also Mitigation Measure T-4) **(Level 2) - At least seven days prior to construction at the affected location.**
- PC2 If the affected public agencies determine that the loss of parking spaces would create a hardship, alternative spaces shall be arranged SFPP, if feasible, and appropriate guide signs shall be installed. (See also Mitigation Measure T-4) **(Level 2) - At least three days prior to construction at the affected location.**

Effectiveness Criteria: If parking hardships are not created for adjacent residents/businesses as determined and reported by the affected public agency.

Effectiveness Timing: Prior to and during construction.

Mitigation Measure T-11a: SFPP shall submit the location(s) of staging areas to the CPUC and the appropriate local jurisdiction(s) for review and approval 30 days prior to the start of construction. These locations and truck routes used during construction shall avoid residential areas . (See Mitigation Measure T-8)

Mitigation Measure T-12: Roads disturbed by construction activities or construction vehicles shall be properly restored to ensure long-term protection of road surfaces. Care shall be taken to prevent damage to roadside drainage structures. Roadside drainage structures and road drainage features (e.g., rolling dips) shall be protected by regrading and reconstructing roads to drain properly. A road maintenance program shall be established and implemented by SFPP for portions of the road where the pipeline is buried. Said measures shall be incorporated into an access agreement/easement with the applicable governing agency prior to construction.

Impact: Construction activities and vehicles could damage road surfaces (Class II).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP provides copies of documents permitting construction within each road right-of-way **(Level 2) - Prior to construction.**
- PC2 SFPP provides written documentation from each affected public agency (city, county, Caltrans, or ANF) that each affected roadway has been satisfactorily restored and/or reconstructed. **(Level 2) - Within 30 days of roadway being restored and/or reconstructed.**
- PC3 Roadside drainage structures (culverts, storm drains, etc.) and road drainage features are protected from damage during construction. **(Level 2) - During construction**
- PC4 SFPP submits approved excavation permits for each jurisdiction that define resurfacing requirements for roadways where the pipeline is buried. **(Level 1) - During and post construction**

Effectiveness Criteria: Restoration/maintenance of roads to pre-construction conditions as determined by the affected public agency.

Effectiveness Timing: After construction is completed on each affected roadway.

Mitigation Measure T-13: SFPP shall coordinate in advance with public transit agencies to avoid disruption to transit operations. Public transit agencies which operate bus routes on the roadways potentially affected by the proposed construction activities shall be informed in advance of the pipeline project and the potential impacts at bus stop locations. Alternate pick-up/drop off locations shall be determined and signed appropriately. SFPP shall document coordination with transit agencies and provide documentation to the CPUC prior to the start of construction.

Impact: Construction could affect public transit operations (Class II).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP provides documentation of coordination with and proof of written notification to public transit agencies. **(Level 1) - At least 30 days prior to start of construction in affected districts**
- PC2 SFPP installs temporary signs directing the public to the alternative pick-up/drop-off zones, as required by the affected transit agency. **(Level 2) - At least 15 days prior to start of construction in affected districts.**

Effectiveness Criteria: If safe and efficient transit operations are maintained, subject to approval by transit operators.

Effectiveness Timing: Prior to and during construction.

Mitigation Measure T-14: SFPP shall coordinate issues of construction compatibility of rail operations with MTA, Port of Long Beach, and other rail operators as applicable. SFPP and contractors shall plan and implement all activities within the railroad ROW with the appropriate railroad personnel. Railroad representatives shall be on site at all times during construction along active rail lines. SFPP shall submit documentation of coordination with rail operators to the CPUC prior to construction .

Impact: Construction could affect rail operations (Class III).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP provides written documentation of coordination with appropriate rail operators. **(Level 1) – At least 30 days before construction affecting each rail liner.**
- PC2 Construction along active rail lines shall be in accordance with railroad requirements **(Level 3) - During construction.**
- PC3 Railroad representatives shall be on-site at all times during construction along active rail lines, unless otherwise stipulated in writing by the appropriate rail operators. **(Level 1) - During construction**

Effectiveness Criteria: If rail operations are maintained without disruption or decreased safety for trains or construction workers as reported by each affected railroad company.

Effectiveness Timing: Prior to and during construction.

Mitigation Measure T-16: SFPP shall maintain close coordination with the agencies responsible for encroachment permits on each affected roadway and with the utility companies which have facilities along the same ROW. The Traffic Control Plans (Mitigation Measure T-2) shall take into account other construction projects and their planned mitigation procedures.

Impact: Cumulative impacts of simultaneous construction projects (Class III).

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP provides documentation of coordination with each affected agency and with each affected utility regarding scheduling and routing of the pipeline construction activities. **(Level 1) - Prior to construction.**
- PC2 SFPP provides copies of all applicable encroachment permits. **(Level 1) - Prior to and during construction.**

Effectiveness Criteria: If cumulative construction impacts do not occur at any location as determined by each affected public agency.

Effectiveness Timing: Prior to and during construction.

Applicant-Proposed Measure T-18*: Restrict all necessary lane closures or obstructions on major roadways to off-peak periods (including night-time construction where allowed) to mitigate traffic congestion and delays which could be caused by lane closures during construction and by exploratory excavations (see Mitigation Measure T-1).

Applicant-Proposed Measure T-19*: Notify appropriate parties of potential obstructions and alternative access provisions. Blocked access to nearby properties will require advance coordination with property owners and tenants. Where construction activities would interfere with access to local businesses and/or residents, property owners shall be notified of the potential obstructions. Alternative access provisions and parking will be provided where feasible, with guide signs to inform the public (see Mitigation Measure T-4).

Applicant-Proposed Measure T-20*: Schedule construction for critical land uses so that at least one access driveway is left unblocked at all hours or during business hours (see Mitigation Measure T-5).

Applicant-Proposed Measure T-21*: Provide alternative pedestrian access routes, signed/marked appropriately, to avoid obstruction to pedestrian circulation (see Mitigation Measure T-6).

Applicant-Proposed Measure T-22*: Develop a traffic plan in order to increase safety for the traveling public. Obtain input and approval from responsible public agencies as required. Use flaggers, warning signs, lights, barricades, cones, and other forms of traffic safety devices according to standard guidelines outlined in the Caltrans Traffic Manual, the Standard Specifications for Public Works Construction, and the Work Area Traffic Control Handbook (WATCH)(see Mitigation Measures T-1 and T-2).

Applicant-Proposed Measure T-23*: Coordinate with emergency service providers in advance to avoid restricted movements for emergency vehicles. Notify police departments, fire departments, ambulance and paramedic services in advance of the proposed locations, nature, timing, and duration of construction activities and access restrictions that could impact their effectiveness. At locations where access to nearby property is blocked, provisions such as plating over excavations, short detours, and alternate routes shall be made at all times to accommodate emergency vehicles. The traffic plan will include details regarding emergency service coordination and procedures (see Mitigation Measure T-7).

Applicant-Proposed Measure T-24*: Ease the temporary loss of parking spaces through advance notification and temporary replacement of spaces. Where construction activities would eliminate existing parking spaces, advance signing (at least 72 hours) and notification to nearby residents and businesses will occur. If the loss of spaces would create a hardship, alternative spaces will be arranged, if feasible, and appropriate guide signs installed. The traffic plan will include provisions regarding the loss of existing parking spaces (see Mitigation Measure T-11).

Applicant-Proposed Measure T-25*: Coordinate in advance with public transit agencies to avoid disruption to transit operations. Public transit agencies which operate bus routes on the roadways potentially affected by the proposed construction activities will be informed in advance of the pipeline project and the potential impacts at bus stop locations. Alternate pick-up/drop-off locations will be determined and signed appropriately (see Mitigation Measure T-13).

Applicant-Proposed Measure T-26*: Coordinate rail operations compatibility issues with the MTA, Union Pacific Railroad, and other rail operators as applicable. SFPP and contractors will plan and implement activities within the

railroad ROW with appropriate railroad personnel. Access to the railroad tracks will be maintained at all times, and access to all rail passenger stations will be maintained during operating hours (see Mitigation Measure T-14).

VISUAL RESOURCES MITIGATION MEASURES

Mitigation Measure V-1: SFPP shall confine construction activities and materials storage to within the specified (50-foot maximum) pipeline ROW, at above-ground facility sites (such as existing stations), and within temporary construction yards. All food-related trash (wrappers, cans, food scraps, etc.) shall be disposed of in closed containers, and the containers regularly removed from the construction site.

Impact: Construction activities and equipment would result in visual intrusion to viewers along the ROW (Class III).

Performance Criteria, Violation Level, and Timing:

- PC1 All construction activities and materials are confined to designated pipeline ROW (defined as curb to curb of streets utilized) and above-ground facility sites. **(Level 3) - During construction.**
- PC2 All food-related trash is disposed of in closed trash containers that are provided onsite. **(Level 2) - During construction.**
- PC3 All trash containers are emptied when full and are removed from the ROW crews are not working in that area **(Level 2) - During construction.**

Effectiveness Criteria: Verification that construction crews confine activities to ROW and that no food-related trash is visible along route.

Effectiveness Timing: During construction.

Mitigation Measure V-2: Night time construction lights shall be directed away from the visual field of motorists and pedestrians along the ROW. Unless approved by the local jurisdiction, no night construction should occur within 500 yards of any residence or non-residential sensitive receptor with night-time use, includes construction at the Norwalk Station which abuts a residential development. All adjacent landowners and residents shall be given 7 days written notice of upcoming night construction; the notice shall include the specific times, locations, and locations of night construction activities.

Impact: Visual intrusion of night time construction lights on motorists, pedestrians, and residences along the ROW (Class II)

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP provides copies of notices to a CPUC designee; notice to be approved by Technical Reviewer prior to distribution. **(Level 1) - 22 days prior to start of night-time construction**
- PC2 SFPP provides verification of when and how notices regarding night construction were mailed, published, and posted. **(Level 1)- 5 days prior to start of night-time construction.**
- PC3 Night time construction does not occur within 500 yards of any residence or sensitive receptor unless SFPP provides written approval from the local jurisdiction. **(Level 3) - During construction**

Effectiveness Criteria: Verification of notices sent. Affected property owners should be aware of construction times and schedules and have had the opportunity to make or have SFPP make alternative construction plans. If multiple complaints of "no notice" are received, then additional noticing as determined by Technical Reviewer will be required.

Effectiveness Timing: Prior to and during construction.

Applicant-Proposed Measure V-3*: SFPP will return the ROW to its original condition after construction, including removal of debris, construction signs, and surplus materials, and re-paving affected streets.

Impact: Temporary visual contrast of the ROW and surrounding uses (Class III)

Performance Criteria, Violation Level, and Timing:

- PC1 SFPP shall remove all debris, construction signs, and surplus materials from the ROW that were not already on-site at the start of construction. **(Level 2)- 30 days from the end of construction.**
- PC2 SFPP shall provide written verification from the local jurisdiction that the re-paving of affected streets [to a level] is acceptable to the local jurisdiction. **(Level 2) - 5 days from the end of construction**

Effectiveness Criteria: On-site inspections show no project-related debris is left on the ROW and the streets are re-paved.

Effectiveness Timing: During and after construction.

Applicant-Proposed Measure V-4*: Where a waterway is crossed on a bridge, the insulated pipeline could be installed in an outer casing painted to blend into the environment. [**Note:** No bridge crossings applicable with approved route.]

APPENDIX A-3

PRE-OPERATION MITIGATION MEASURES

Appendix A-3 Pre-Operation Mitigation Measures

BIOLOGICAL RESOURCES

- B-7* SFPP has prepared an Oil Spill Response Plan (OSRP) which outlines procedures for containing and recovering the spilled products at the earliest possible moment so that the area of contamination is limited.
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HYDROLOGY AND WATER RESOURCES

- H-12* The pipeline will be equipped with a computerized leak detection system that will alarm operating personnel when operational parameters are exceeded.
- H-13* SFPP's spill response program includes an objective to initiate containment and control of large spills in less than one hour.
-

SOCIOECONOMICS, PUBLIC SERVICES, AND UTILITIES

- S-5 SFPP shall set priorities for disaster repair efforts on utility lines and transportation networks, subject to approval by the affected Offices of Emergency Services. Those utility lines vital to the region must be repaired ahead of other lines. A contact person shall be appointed to coordinate restoration. This information shall be included in the Oil Spill Contingency Plan (see Mitigation Measure SS-16 in Section C.11, System Safety and Risk of Upset).
- S-6* Plan with public agencies in Los Angeles County to provide consultation and training as appropriate to emergency service providers to ensure adequate emergency response to pipeline related accidents.
-

SYSTEM SAFETY AND RISK OF UPSET

- SS-6 SFPP shall develop and implement a program for routine inspection of mainline valves every six months. The valves shall be checked for mechanical integrity. Remotely activated block valves shall be checked to ensure they function automatically and properly within 60 seconds. Check valves should be checked annually to assure proper functioning. Maintenance records shall be retained for inspection by the State Fire Marshal.
- SS-7 SFPP shall ensure that the existing safety and monitoring systems at all affected pump stations (Watson, Norwalk, City of Industry and Colton) will provide for safety of operations with the increased throughput resulting from implementation of the proposed project (from 350,000 BPD to 520,000 BPD). The safety and monitoring system should include, but not be limited to, the following:
- High temperature shutdown
 - Overpressure protection
 - Fire detectors (voting system)

 - Motion detectors (speed and vibration) for pumps
 - Hydrocarbon detectors with one detector to alarm and 2 to shutdown (voting system)
- SS-9 SFPP shall install at least two flammable/combustible hydrocarbon detectors at each remotely operated pump, with a voting system. The pump shall be shutdown if two detectors signal an alarm at the same time.

- SS-10 SFPP shall install a SCADA system that can detect a leak of 1% of maximum flow (85 bbl/hour) within 5 minutes and utilizes at least a four-tier leak detection method:
- Over/short accounting
 - Pressure point monitoring
 - Volumetric balance with line pack correction
 - Pressure profiling
- SS-11 SFPP shall develop and implement an internal corrosion prevention program in compliance with State and Federal pipeline safety standards enforced by the State Fire Marshal. Specifically, this program shall include a baseline smart pig run conducted either prior to startup or within 90 days after startup.
- SS-13 After every 20 years of operation, SFPP shall conduct a full analysis of the pipeline components for safety and reliability. This analysis is in addition to the normal maintenance and inspection required, and should include the results of a comprehensive "smart pig" inspection, the integrity check on pump stations, heaters, storage tanks, valves, communication systems and other components. A full report on the status of the entire system, any potential deficiencies and the remedial actions should be prepared. This report should be submitted to CPUC and the California State Fire Marshal or their successors. The continued operation of the pipeline after 20 years should be dependent on these agencies' approval of the safety status as presented by the Applicant.
- SS-14 A report on SFPP's Process Safety Management Analysis shall be provided to the California State Fire Marshal and the CPUC prior to operation of the pipeline.
- SS-15 SFPP shall install speed and vibration sensors at the Watson Station to shut down the pipeline automatically in the event that threshold acceleration should be exceeded. Such devices shall be required to detect earthquakes with intensity of 6.0 or more. The petroleum industry has some objections to automatic shutdown systems because erroneous shut down procedures have caused accidents. Should SFPP disagree with this mitigation, a report shall be prepared by SFPP clearly demonstrating, to the satisfaction of CPUC and CSFM, that these sensors would result in more product spill accidents than they would prevent.
- SS-16 SFPP shall develop an Urban Spill Response Plan (USRP) as a separate document to supplement its existing and approved Oil Spill Core Plan (OSCP) and California Marine Waters Appendices. The USRP shall be provided to the CPUC, the California State Fire Marshal, and all jurisdictions along the pipeline ROW for review and comment prior to its finalization. The USRP shall include the following lists or information:
- A listing of areas of archaeological sensitivity (if any) within the potentially affected spill area, incorporating any discoveries made during construction. If such areas are identified, a qualified archaeologist approved by CPUC shall monitor all clean up activities that involve excavation or grading. If the archaeologist identifies resources that cannot be avoided, the specific measures described in Mitigation Measures C-1, C-2 and C-3 shall be implemented after containment of the spill is completed.
 - A listing of sensitive land uses along the Carson to Norwalk Pipeline route, including schools, residences, religious facilities, recreational lands, other land uses with large concentrations of people, and environmentally sensitive habitat areas.
 - A listing of potential traffic and access concerns for each street in which the pipeline is located, including a map showing emergency egress routes to be used in the event of a pipeline accident.
 - A description of the process by which SFPP would evaluate the need for compensation of businesses that experienced disruptions as a result of a pipeline accident or emergency response actions.

The USRP shall also include three Response Strategies (similar to the existing response strategies included in SFPP's Oil Spill Core Plan) to address potential accidents in the Carson to Norwalk environment:

- (1) Pipeline Failure Resulting in Product in an Urban, Controlled-Access River, specifically describing response techniques in a lined channel and how/where access to the channel can be gained. The strategy shall list seasonal average flow rates for the Los Angeles and San Gabriel Rivers, and the relationship of these flow rates to spill response equipment feasibility and use. Calculate and present the maximum volume of petroleum products that could spill into the waterway (either directly or via storm drains) assuming that the pipeline was operating at maximum capacity, and for each of the following scenarios: (a) waterway flowing at average low flow (average flow for May through October), and (b) waterway flowing at average high flow (average flow for winter rainstorm), c) best-case and worst-case times required to close valves on either side of river
 - (2) Pipeline Failure in an Urban Environment, specifically describing response strategies requiring traffic control/diversion, prevention of product flow into storm drains, recovery of spilled product from storm drains or river systems, crowd control, and protection of users of nearby sensitive land uses (schools, hospitals, etc.). The strategy for responding to an urban spill shall specifically address and define appropriate response to fire and/or explosion. Where aspects of emergency response are handled or directed by local Fire Departments or other agencies, those agencies shall be contacted for input into the USRP.
 - (3) Spill Reaching Marine Environment, specifically identifying sensitive habitats with priority for protection, sensitive species and their potential locations in the affected marine or coastal environment. The response strategy shall include estimated time for a spill to reach the mouth of each river under each scenario. It shall list sensitive species potentially occurring in the waterway or in the harbor, and describe methods of protecting those species in the event of the worst-case spill event. It shall define specific cleanup methodology and techniques for containment and cleanup in the harbor and on the shoreline (specifically including the Anaheim Bay National Wildlife Refuge).
- SS-18 SFPP shall supply and maintain the spill containment and response equipment at locations accessible to first response personnel along the route to facilitate rapid response to a product spill. This equipment shall be located within 60 miles of the proposed pipeline.
- SS-19 SFPP shall conduct a public education program consistent with 49 CFR 195.440, as enforced by the California State Fire Marshal, to help the public and affected agencies understand pipeline safety hazard. An Internet Web Site shall be created, including the contents of the pipeline safety brochure and a detailed map of the pipeline. The Web Site shall be operational prior to pipeline operation.
- SS-21 SFPP shall provide to local fire departments with responsibility for the Watson and Norwalk Stations additional supplies of appropriate fire-fighting foam or other agents, in quantities agreed upon by the fire departments and the California State Fire Marshal. Documentation of provisions provided by SFPP to fire departments shall be provided to the CPUC prior to operation of the pipeline.
- SS-23 The proposed pipeline shall be used only as stated in SFPP's project description: for transportation of specified products only (gasoline, jet fuels, and diesel) and at the maximum flow rate of 8,500 barrels per hour (204,000 BPD). No exceedance of this level is allowed without appropriate environmental review and analysis, and no other material or products (whether in gas or liquid form) may be transported through this pipeline.
- SS-24 To reduce likelihood of damage to the pipeline from third-party construction, and to inform adjacent landowners and residents of pipeline placement, SFPP shall install pipeline location markers in compliance with Federal and State pipeline safety standards.
- SS-25* SFPP is planning to install a new SCADA system on its entire pipeline system, starting in mid-1998 and finishing by the end of 1999. The new system will have all pipeline monitoring and control in SFPP's Orange County Control Center. Other enhancements to the system include:

- Use of system-wide satellite communications and back-up frame-relay routing capabilities
 - Installation of an off-site strategic backup control center
 - Increase in data transmission rates from once per minute to once every 5 seconds (resulting in higher data resolution and as a result, better leak detection performance).
- SS-26* Pipeline operations are continuously monitored by a computerized SCADA system that alerts operators to unusual pipeline conditions (high or low pressure, low flow). Includes automatic high pressure shutdown at pump stations; operators at Watson Station and Controller can shut down the pipeline remotely based on monitoring of operations. All alarms are recorded and logged at the control center. SCADA system has back-up power from a diesel generator at the central control center in Orange and back-up power from an Uninterruptible Power Supply (UPS) at each of the critical stations and terminals.
- SS-27* As part of the Carson to Norwalk Pipeline Project, six remotely-activated block valves will be installed along the new pipeline segment (two at each waterway crossing), one manually-operated valve at each of the Watson and Norwalk Stations, and two manually operated valves at the Industry Station. Valves will be protected from damage by heavy equipment; area around valves will be kept clear to minimize fire danger.
- SS-28* The new pipe will have factory-installed coating of a polyethylene or polypropylene material. Field coating would be provided for all field weld joints to provide a continuous coating along the pipeline.
- SS-29* Standard operating procedures and operator training have been developed and provided; shutdown and start-up of pumps and pipeline system in an orderly manner is practiced.
- SS-30* If a natural event (e.g., earthquake) occurs, the line would be shut down and checked for damage prior to re-starting.
- SS-31* The new pipe will have a cathodic protection system and a regular monitoring program to evaluate the condition of coating by analysis of rectifier current history. This system will have a maintenance and inspection program. Also, a resistance-type probe will be used to monitor internal corrosion. Electrical resistance hand probes will also be used to detect large areas that may have incurred significant external coating failure.
- SS-32* The pipeline route will be inspected by a regular line rider and/or aerial inspections.
- SS-33* The integrity of the pipeline will be inspected by “smart pigs” (internal pipe inspection tools). The condition of the pipe and coating will also be inspected whenever an area around the pipe is excavated.
- SS-34* When the line is shut down, static pressure monitoring will facilitate leak detection.
- SS-35* Mainline block valves for the project would be electrically powered and can be remotely closed from the various manned control centers. Block valves would be inspected every six months to ensure proper operation (per regulation 49 CFR 195.420).

APPENDIX A-4
PROJECT PARAMETERS

APPENDIX A-4: PROJECT PARAMETERS

Project parameters are details of pipeline design or construction that SFPP defined in the application submitted to the CPUC. These parameters formed the basis for the environmental analysis that was done for the EIR, so it is important to know that the project is constructed as it was defined. Many project parameters have been incorporated into mitigating measures or Applicant-proposed measures, so their implementation will be monitored as part of the measures listed in Appendices A-2. Other parameters (not covered in those measures) are listed below. These parameters will be checked by the Environmental Monitors periodically to ensure that project construction and design features are implemented as proposed.

PIPELINE CONSTRUCTION

- PP-1 Usual access would be maintained when possible. Construction during holidays would be minimized when possible (FEIR, pg B-20).
- PP-2 Waste generation from construction in the form of short sections of line pipe, welding and coating waste, as well as boxes and crates used in the shipment of materials would typically be hauled to the local recycling centers (FEIR, pg B-22).
- PP-3 Trash containers would be provided for daily refuse from construction workers (FEIR, pg B-22).
- PP-5 Construction crews would use portable chemical toilets (FEIR, pg B-22).
- PP-6 No undisturbed areas will be used for staging area or storage yard purposes (FEIR, pg B-22 and B-25). [Note: MTA ROW and SCE ROW may be exceptions if landowner approval is received]
- PP-7 Construction equipment would be regularly checked for leakage (FEIR, pg B-25).
- PP-8 Project construction would require little demand for electrical power; where needed, generators would be used onsite for power (FEIR, pg B-25). [Note: Electric power will be provided to the staging area]
- PP-9 The contractor will be required to use only equipment with all required permits and licenses (FEIR, pg B-25 and B-26).
- PP-10 The volumes of excavated material that will not be used to backfill the trench (approximately 7,626 cy of concrete/asphalt rubble and 15,253 cy of soil) will be disposed of at the following facilities:
- Concrete and asphalt will likely be sent to Blue Diamond Inc., a demolition materials recycling company with locations in Carson, South Gate, Orange, Fullerton, and North Long Beach.
 - If the material is not acceptable to Blue Diamond, the material will be sent to landfills. Surplus soil will be sent to the landfill, or depending on construction timing and needs, it could be brokered and used for fill at other sites (FEIR, pg B-26).
 - The Puente Hills landfill (about 14 miles from the project area) is the primary sanitary landfill that will be utilized, with the Scholl Canyon or Olinda Alpha landfills as alternative sites.
- PP-11 Emergency response providers near the proposed route would be notified in advance of construction locations, road closure schedules, and potential alternate routes (FEIR, pg B-27).
- PP-12 Once traffic control measures are in place, ditching operations would begin (FEIR, pg B-27).
- PP-13 As a safety precaution, a minimum of one 20-pound dry chemical unit fire extinguisher would accompany each welding truck on the job (FEIR, pg B-30).

PP-14 The pipe will be hydrostatically tested in one continuous 14-mile segment (FEIR, pg B-30).

Boring at Water Crossings

PP-15 The pit would be excavated outside the paved storm water channel (FEIR, pg B-32).

PP-16 The bore would be drilled a minimum of 4 feet below the 100-year scour depth of the stream channel (FEIR, pg B-32). [or 10 feet below channel bottom; see Mitigation Measure H-4]

PP-17 Any contaminated wastes would be loaded into barrels or dump trucks and hauled off-site to an approved disposal site (FEIR, pg B-32).

PP-18 Any groundwater encountered during drilling would be pumped out of the pit into tank trucks for transport and disposal in an approved manner (e.g., in a sanitary sewer; FEIR, pg B-32).

PP-19 Steel casing, where required, would be used to encase the bored pipeline. The casing will be carbon steel pipe (FEIR, pg B-32).

PP-20 Upon completion of the pipeline installation, the excavated areas would be backfilled, compacted, re-contoured and restored according to permit requirements (FEIR, pg B-32).

Highways, Railroad And Pipeline Crossings

PP-21 Placement of the pipeline bore with respect to other utilities would be in accordance with 49 CFR 195.250 that requires a minimum clearance of 12 inches from any underground structure (FEIR, pg B-34).

PP-22 The only interstate highway requiring boring will be the Long Beach Freeway. All other freeway crossings will be done at grade, where the street within which the pipeline is located passes beneath the freeway (FEIR, pg B-34).

PP-23 At the Watson Station, electrical crews will install new conduits and wires to power the new equipment, and they will relocate or upgrade any existing electrical facilities which may be in conflict with the new equipment (FEIR, pg B-34).

TESTING & START UP PROCEDURES

Electrical Systems

PP-24 A complete check of the new electrical system and mechanical equipment at Watson and Industry Stations will be performed (FEIR, pg B-31).

PP-25 Pumps will be un-coupled and their motors tested for rotation and valves are cycled (FEIR, pg B-31).

PP-26 A complete test of the SCADA controls will be performed with computer simulated inputs to test the response of the Programmable Logic Control (PLC) and the software (FEIR, pg B-31).

Hydrotesting

PP-27 The pipeline will be filled with water from the fire system at Watson Station, and pressurized to 1,800 psi to test the integrity of the pipe and mainline valves (FEIR, pg B-31).

PP-28 While the pipe is under pressure, the pipeline will be patrolled and inspected for leaks (FEIR, pg B-31).

PP-29 Water will be displaced from the pipe using oil-free compressors and collected in a breakout tank at Watson to be tested and treated, if necessary, before it is discharged (FEIR, pg B-31).

Cleaning

PP-30 The pipeline will be cleaned using multiple passes of abrasive and cleaning foam pigs (FEIR, pg B-31).

Static Test

PP-31 After cleaning, gate valves will be installed, the final connections will be made, and all welds x-rayed (FEIR, pg B-31).

PP-32 Diesel will be introduced into the pipeline. Air in the pipe will be vented at Norwalk through a vacuum truck until the truck is completely filled with diesel. A static pressure test is then performed on the pipe using the mainline pump to less than 440 psi between Watson and Norwalk (FEIR, pg B-31).

PP-33 During the test, the pipeline will be monitored and checked for any abnormalities (FEIR, pg B-31).

Performance Test

PP-34 The pipeline will be started and the booster and mainline pumps will be operated at maximum discharge pressure at Watson. Again, the pipeline will be patrolled and checked for any abnormalities (FEIR, pg B-31).

Test Industry Pumps

PP-35 After this test is completed at Watson, the pumps at Industry will be started and a running test will be performed between the Industry and Colton stations, during which the pipeline will be patrolled and checked for any abnormalities (FEIR, pg B-31).