SECTION 12

SOILS AND WATER RESOURCES

12.1 Wastewater Volume, Quality, Treatment

Wastewater will be discharged to the Los Angeles County Sanitation District 14 sewer system. Refer to Attachment R. To establish sewer service for the project, the City of Lancaster will extend a new sewer line about 700 feet across Avenue H onto the project site.

Lancaster Energy Facility #1 will consume approximately 400 gallons per minute (gpm) of potable water at peak use. The waste discharge will be much less. Total wastewater including domestic and service water as well as process wastewater will be approximately 10 gpm. The only change in water quality will be an increase in concentrations of total dissolved solids. Because the quality of the service and process wastewaters will be good, no treatment will be required. Therefore, a portion of the water will be used for landscaping purposes. A brief description of the individual streams appears below:

Domestic Water System: This system will produce approximately 2 gpm of waste and will consist of normal sanitary sewer system wastes. No significant increase in total dissolved solids is expected.

Service Water System: This system will produce approximately 3 gpm of waste and will consist primarily of general washdown water. No significant increase in total dissolved solids is expected.

Demineralizer System Blowdown: This source of wastewater will be from the operation of the reverse osmosis water treatment system used to produce high purity water for injection into the turbines as part of the air emissions control system. This system will produce approximately 16 gpm. The quality of the reverse osmosis wastewater will be good, with the cycles of concentration between 3 and 4 times that of fresh water. There will be no chemical treatment of the reverse osmosis wastewater. The water will be of good enough quality to be used for landscaping purposes rather than sending it to the sewer. Approximately 5 gpm could be routed to the sewer.

The four GE Frame 7-B turbines will use an estimated 100 gpm per unit with an estimated waste stream of 30 gpm per unit. Of the 30 gpm, approximately 18 gpm will go to the evaporative cooler unit and the rest will be used for internal and external project site needs. There will be no waste discharge from the turbines into the sewer system.

The Los Angeles County Sanitation Districts have discharge requirements for temperature, pH, and various heavy metals. Lancaster Energy Facility #1 will meet all requirements for discharge into the sewer lines.

12.2 Status of Permits for Wastewater Discharge or Draft Permit (WDR/NPDES)

Erosion and sediment controls and other Best Management Practices (BMPs) will be implemented for the construction, post-construction, and operation phases, in accordance with the California NPDES General Permit for Storm Water Discharges Associated with Construction and Industrial Activities, and with other local laws and ordinances as applicable.

Lancaster Energy Facility #1 has submitted a Notice of Intent (NOI) to comply with the terms of the General Permit to Discharge Storm Water Associated with Construction Activity to the State Water Resources Control Board (SWRCB) for the project site and the pipeline. Refer to Attachment R. Evidence of the filing of the NOI is required by the City of Lancaster prior to issuance of grading or encroachment permits. A Storm Water Pollution Prevention Plan (SWPPP) as required by state law will be developed prior to commencing construction activity on the project site and the 23-mile pipeline. Refer to Section 12.4.

Prior to commencing operation, Lancaster Energy Facility #1 will submit a Notice of Intent (NOI) to comply with the terms of the General Permit to Discharge Storm Water Associated with Industrial Activity to the SWRCB. A SWPPP as required by state law will be developed for industrial activity for Lancaster Energy Facility #1.

The City of Lancaster owns the local sewer system and will allow Lancaster Energy Facility #1 to tie into the sewer system. The City is in the process of annexing the project site into Los Angeles County Sanitation District #14. The annexation will be completed prior to hookup of the power plant. City staff, working in conjunction with the Sanitation District, have reviewed the sewer system's capacity and found that the sewer system can serve the project. Refer to Attachment R for letters from the City and the Sanitation District.

12.3 Draft Erosion Prevention and Sedimentation Control Plan or Mitigation Strategy

Construction design and practices will minimize soil and wind erosion during construction and operation of all facilities associated with Lancaster Energy Facility #1 and the associated pipeline. As a result, onsite storm water will be controlled; soil erosion and sedimentation will be minimized; federal, state, and local water quality standards will be met; and water inundation on- and off-site will be prevented.

During planning a drainage control plan will be established for the project site and the pipeline. The project's hydrology and hydraulic calculations required in evaluating drainage controls will be developed. These calculations will be signed by a licensed California Civil Engineer and will accompany the grading plans required by city/county for the grading permit approval. A soil erosion and drainage control plan will be developed. The drainage control plan will address storm water runoff and sediment

controls for the existing condition and during construction development. This information is necessary to secure the grading permit.

After grading and compacting, the soil excavated from the project site and pipeline will be revegetated or covered with a synthetic mat as necessary to prevent wind and water erosion. A SWPPP for construction will be prepared that presents measures to minimize sediment and other pollutants in storm water discharges during the project's development. The SWPPP will help identify the sources of sediment and other pollutants that affect the quality of storm water discharges. The SWPPP will also describe and ensure the implementation of practices to reduce sediment and other pollutants in storm water discharges during construction. The SWPPP will include Best Management Practices (BMPs) that address source reduction and provide measures/controls necessary to mitigate potential pollutant sources. The SWPPP will conform with the City of Lancaster's design criteria. A sample plan and current notes can be found in Attachment R. The SWPPP will be available to the public under Section 308(b) of the Clean Water Act and will be made available to SWRCB upon request. Required elements of the SWPPP include:

- Site description
- Erosion and sediment controls
- Non-storm water management
- Waste management and disposal
- Implementation of other approved plans

The following measures are proposed to reduce construction impacts to minimal levels:

- Surface soil protection that may include the use of mulches, synthetic netting material, riprap, and compacting of native soil.
- Soil graded and compacted to ensure that soil is not left in irregular piles that are susceptible to wind and water erosion. Seeding will be performed in the areas where natural vegetation has been disturbed or removed by construction.
- Conduct all construction activities in accordance with California's General Storm Water Permit for Construction Activity.
- Conform to applicable engineering standards to ensure that the project will not cause soil loss through accelerated erosion.

Prior to operation, a separate SWPPP and Storm Water Monitoring and Reporting Plan for the General Permit to Discharge Storm Water Associated with Industrial Activity Permit will be prepared.

12.4 Spill Prevention/Water Quality Protection Plans

The amount of oil onsite will exceed the threshold quantity for a Spill Prevention Control and Countermeasures Plan (SPCC) as per 40 CFR 112 (refer to Section 7). The SPCC will be prepared in accordance with federal and California regulations. This plan must be prepared if petroleum products stored onsite in aboveground storage tanks with a capacity

that equals or exceeds 660 gallons for a single tank, or equals or exceeds 1,320 gallons for more than one tank. The SPCC Plan will be prepared prior to delivery of petroleum products to the site. The SPCC Plan will include information on spill response procedures and fuel storage.

The storage and handling of aqueous ammonia at the site will be covered under the California Accidental Release Program (CalARP). The CalARP will be completed and approved, as appropriate, prior to the introduction of the chemical onsite.

The operating facility will require an SWPPP and a Storm Water Monitoring Plan. A Notice of Intent (NOI) will be submitted to the RWQCB before the start of industrial activities according to their requirements. This will be followed by the preparation of an SWPPP for the site. All chemicals/oils stored onsite will be in closed containers and will include secondary containment to prevent flow of chemicals and oils into storm waters. The SWPP will contain the following elements:

1.0 General description of facility operations;

2.0 Significant materials used at the facility;

3.0 History of chemical releases from the site;

4.0 Location, storage, and handling of significant materials, oil, and chemicals;

5.0 Current storm water flow patterns and pollution prevention measures;

6.0 Storm water drainage system;

7.0 Spill prevention and response;

8.0 Sediment control and erosion prevention;

9.0 Employee training program and facility record keeping;

10.0 Elimination of non-storm water discharge; and

11.0 Storm water management controls.

The following will also be prepared to record storm water activity.

- Facility storm water inspection checklist.
- Storm water sampling list.
- Annual report preparation format.