

Changes Made in This Amended Application

An air permit application for the Santan Expansion Project was previously submitted to Maricopa County Environmental Services Division (MCESD) on November 30, 2001. Since that time, SRP has reconfigured the layout for the proposed project. This amended application reflects changes made to the layout, addresses comments received to date from MCESD on the initial application, and incorporates other changes as described below.

1. Use of distillate oil in existing units completely removed from application. Both new and existing units are proposed to be fired only on natural gas
2. LAER discussion for turbines and cooling towers updated based on MCESD comments
3. Emissions for new equipment recalculated based on MCESD comments and updates to LAER since the time of the original submittal
4. Existing equipment list revised to include surface coating operations, a cooling tower, and a diesel-fired emergency fire pump
5. New equipment list revised to include a proposed new diesel-fired sump pump
6. Combinations of startup scenarios for the combined cycle units were revised
7. Dispersion modeling re-done to assess impacts from the reconfigured site plan and revised emissions estimates as described above
8. Discussion of compliance with Maricopa County Rule 32F added to the section on dispersion modeling to clarify how this requirement was met
9. New, USEPA-approved emission factor used to calculate formaldehyde emissions from the new and existing turbines
10. Facility-wide HAP emissions included in revised application at the request of MCESD
11. Application text revised to clarify modeling approach
12. Table added to list methods used to derive modeled emission rates for new units
13. Soil and vegetation impacts analysis added

increase in emissions from the proposed expansion. The reductions will be achieved with low NO_x combustors and oxidation catalysts. As noted previously, a significant permit revision for these changes has been issued by MCESD. The emission reductions associated with this revision have been approved by USEPA in a letter dated November 12, 2001. Information on the permit revision can be found in Appendix C. In addition, SRP, as part of this expansion, will accept a condition allowing natural gas as the only fuel to be used in the existing units. Fuel oil will no longer be permitted for use in the existing Santan units.

2.4. Emissions From the Proposed Project

Emissions of air contaminants from the expansion project will primarily consist of NO_x, CO, PM₁₀, VOC, and SO₂ from the combustion of fossil fuel, in addition to PM₁₀ from the new cooling tower. A discussion of these emissions is provided in this section.

2.4.1. Criteria Pollutants

As discussed in Section 2.2, the proposed expansion project will involve the installation and operation of the following equipment:

- Three (3) combined cycle systems, each consisting of:
 - One (1) natural gas fired combustion turbine; and
 - One (1) HRSG with supplemental duct burners
- Two (2) diesel fuel fired emergency pumps; and
- Two (2) mechanical draft cooling towers.

Tables 1 and 2 contains summaries of the estimated emissions (excluding startup emissions) from each combined cycle system.

The combined cycle systems will also be equipped with supplemental natural gas-fired duct burners. The duct burners will be operated primarily during the summer to provide additional steam to the steam turbine. This will allow the Santan plant to produce additional electric power during periods of peak power demand. The emissions for the combined cycle system listed in Tables 1 and 2 also include emissions from operation of the duct burner.

5. SRP will confirm that the following emission offsets have been certified as of the official startup date of the new equipment associated with the proposed expansion project:

PM₁₀: 193-263 tons/year, depending on distance of offsets from facility

VOC: 91 tons/year

6. SRP will accept a condition allowing natural gas as the only fuel to be used in the existing units. Fuel oil will no longer be permitted for use in the existing Santan units. Any conditions related to burning oil in the existing units in the existing permit will be removed when the permit revision is issued.