2.4 Ancillary Facilities

The ancillary facilities necessary to support the Rosemont mine and ore processing operations include an administration building, change house, warehouse with lay down yards, analytical laboratory, light vehicle and process maintenance building, mine truck shop, mine truck wash and lube facility, powder magazines and ammonium nitrate storage, and a main guard shack with truck scale. Also included are fuel and lubricant storage and dispensing facilities for mine and process equipment. The ancillary facilities are shown in Figure 2-8 and are described below. Buildings will be painted to blend with the topographic back drop.

2.4.1 Administration Building

The administration building will be a single story pre-engineered steel building with corrugated metal roofing and siding located at the entrance to the plant, outside the fence line. Visitor and employee parking will also be provided outside the fence. This configuration will allow many of the site's vendors and other visitors to access management and operating personnel without entering the process plant area. The administration building will be approximately 17,000 square feet (sf) and will house all the administrative and management personnel.

2.4.2 Change House

The employee change house will be a single story pre-engineered steel building with corrugated metal roofing and siding located at the entrance to the plant, inside the fence line. Employees will park in the designated parking area outside the fence and walk about 500 ft to the change house. It will be approximately 9,240 sf with a 660-sf extension for a boiler room, and will incorporate a health and safety office, employee training room, and ambulance garage. Separate changing rooms, with showers and bathrooms, will be provided for men and women.

2.4.3 Warehouse

The warehouse for mine and plant operations will be located next to the change house near the entrance of the plant. The warehouse will be a single story pre-engineered steel building with corrugated metal roofing and siding. It will be approximately 6,600 sf and includes an office, lunch room and restrooms. All materials and supplies will be received and stored at this warehouse. Satellite warehouse space will be provided in the mine truck shop and light vehicle repair shop for common and high use items. Delivery from the main warehouse to the satellite warehouse will be by Rosemont operations and maintenance personnel. This will minimize traffic inside the plant.

2.4.4 Analytical Laboratory

The analytical laboratory will be a single story pre-engineered building with corrugated roofing and siding located west of the warehouse near the entrance to the plant. The laboratory will be approximately 8,400 sf and will consist of a sample preparation area, wet laboratory, metallurgical laboratory, environmental laboratory, offices, lunch room and restrooms. A 15-ft overhang will be provided at the

north end of the building to receive materials into the sample preparation area. The sample preparation area will be isolated from the analytical laboratory by a wall. It will contain sample crushers, pulverizers, sample splitters, and a dust collection system to capture and contain any dust generated from this operation. The analytical laboratory will contain the wet laboratory, reagent storage area, balance rooms, and analytical equipment. Also included is a facility to collect and manage waste chemicals in the laboratory. Disposal of the chemical or laboratory wastes will follow appropriate regulatory requirements dependent upon the waste generated.

2.4.5 Light Vehicle Repair Building and Fuel Storage

The light vehicle repair and process maintenance facility will be a single-story pre-engineered steel building located near the entrance to the plant about 200 ft south of the warehouse. The light vehicle repair building will be approximately 4,950 sf with a 20-ft eave height. Two bays of the building will have floor hoists for light vehicle repairs, and two open bays will be used for plant maintenance. A fifth bay, separating the light vehicle repair and plant maintenance facilities, will contain offices, a lunch room, tool room, and restrooms. A contained concrete pad at the north end of the building will contain storage tanks for used oil and antifreeze recovered from the maintenance operation. Bulk grease and lubricant storage and an air compressor will also be located in the contained area. Used antifreeze and used oil will be collected and returned to the supplier for recycling.

A small vehicle fuel station will be located south of the light vehicle repair building along the east perimeter plant road. The light fuel station will contain a 10,000-gallon diesel storage tank and a 10,000-gallon gasoline storage tank. They will be located inside a concrete structure for secondary containment. Gasoline and diesel dispensing pumps will be provided on the west side of the storage tanks. A receiving station for fuel delivery trucks will be located on the east side of the storage tanks. Both the dispensing pumps and the receiving station will be on concrete pads, with any spills collected in a sump within the containment area. The fuel delivery trucks will travel on the east perimeter plant road only when delivering fuels and will not have to enter the process plant area.

2.4.6 Mine Truck Shop and Fuel Storage

The mine truck shop will be located about 1,600 ft south of the process facilities near the waste rock storage area and the pit exit. The operators will maintain left-hand traffic in the mine, the primary crusher dump pocket, on ore and waste haul roads, and to the mine truck shop. This configuration will provide a clear separation between the left-hand mine traffic and the right-hand traffic in the process plant.

The mine truck shop will be approximately 20,000 sf. It will contain three bays to accommodate up to 360-T haul trucks and two bays for miscellaneous equipment such as graders, dozers and water trucks. The three mine truck bays will have an eave height of 67 ft, and the two bays for miscellaneous mine equipment will have an eave height of 36 ft. A 60-T service crane will be used to service the mine truck bays, and a 25-T service crane will be used to service the light equipment bays. The mine truck shop building will be an engineered steel building with corrugated steel roofing and siding because of the

heavier loads from the service cranes. Embedded steel or rail will be installed in the two light equipment bays and one of the mine truck bays for servicing tracked equipment. The three mine truck bays will be drive-throughs; however, the two light equipment bays will not. Offices, restrooms, a mechanical/ electrical room, and a tool room will be positioned across one side of the two light equipment bays in a building extension of approximately 4,300 sf.

A truck fuel storage and dispensing facility will be located adjacent and to the west of the truck shop. The facility will consist of two 100,000-gallon diesel storage tanks located within a concrete containment structure. Delivery trucks will unload on the west side of the storage tanks, and fuel dispensing stations for the mine trucks will be on the east side of the tanks. The west perimeter plant road will extend to the mine truck shop area to allow the fuel delivery trucks to access the tanks. Right hand traffic will extend to the west side of the fuel oil storage tanks and left hand mine traffic will remain on the east side. There will be no need for the fuel delivery trucks to enter left-hand traffic lanes to deliver fuel to the mine area.

2.4.7 Mine Truck Wash and Lube Facilities

A mine truck wash and lube facility will be located to the east of the mine truck shop. The facility will consist of an open concrete pad with four high pressure spray monitors to wash the undercarriage of the mine trucks. A steam generator and four hose stations will also be provided for steam cleaning where necessary. The concrete pad will drain to a concrete settling pit to recover solids and re-circulate the wash water back to a recycled-water tank. Water from the collection pit will overflow to an oil-skimming basin for oil recovery, then will be pumped to treatment equipment to remove residual oil and solids before returning to the recycled-water storage tank. The wash-water settling pit will contain an access ramp for a front-end loader to periodically reclaim the settled solids for disposal on the waste storage areas.

An enclosed lube bay will be located opposite of the wash-water collection pit. The lube bay will be an engineered steel structure with corrugated metal roofing and siding, and will be open on the two ends for drive-through access. The eave height for this structure will be 55 ft to accommodate the haul trucks. The lube pad will contain embedded steel for track equipment and will also drain to the wash-water collection pit. A tank farm for the various lubrication oils and antifreeze, as well as used oil and used antifreeze, will be located to the west of the lube oil bay. These tanks will be in a concrete containment structure for spill control. Used oil and antifreeze will be collected and returned to the suppliers for recycling.

2.4.8 Powder Magazines and Ammonium Nitrate Silos

Separate magazines will be provided for blasting powder and detonator caps. The powder magazine will be a 30-ft by 30-ft masonry block building with a 12.5-ft eave. The detonator cap magazine will be a 13-ft by 13-ft masonry block building with a 10.5-ft eave height. The hollow masonry blocks will be filled with dry-sand cement above foundation level for bullet resistance. Storage capacity will be about 32,000 lbs and 8,000 lbs for explosives and caps, respectively. The magazines will exceed code requirements and be separated by at least 200 ft with intervening separation berms.

The location of the magazines will be directly south of the ultimate pit limit and west of the upper Barrel waste rock storage area. This area is remote, and is shielded on the west by the Santa Rita Mountain ridge, on the south and east by the waste rock storage area and on the north by the pit. Access to the fenced compound will be by the mine haul road running southwest from the primary crusher between the open pit and the waste rock storage area and heap leach pad.

Three elevated ammonium nitrate silos, with 75 T capacity each, will be located at the end of the west perimeter plant road near the mine truck shop. This location allows delivery trucks with ammonium nitrate to access the silos without entering the left-hand traffic area. This area is also convenient for the mine drill trucks to fill up with ammonium nitrate and diesel before going to the mine. The ammonium nitrate and diesel are not mixed until ready to place in blast holes.

2.4.9 Main Guard House and Truck Scale

A main guard building and truck scale will be located at the entrance to the plant. The fence line will run to the guard building with the administration and parking outside the gate and the remaining facilities inside the gate. The guard will have the printing equipment for the truck scale, and the main guard will monitor the incoming and outgoing trucks as well as other traffic. The guard building will be approximately 8 ft by 12 ft with an 18-in roof overhang all around. Any visitors requiring entry to the plant will park in the visitor parking area and enter the administration building to get the necessary clearance.