PERMIT ATTACHMENT
SECTION B

This document was not changed from the April 2016 Application.

FACILITY DESCRIPTION

September 2018

SECTION
B

FACILITY DESCRIPTION

Siemens Industry, Inc.
2523 Mutahar Street
Parker, Arizona 85344

Revision 1
April 2012

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B.1 INTRODUCTION

The following sections contain a general facility description as required by 40 CFR 270.14(b)(1), a description of the topographic map as required by 40 CFR 270.14(b)(19), site location information, seismic considerations, and floodplain standards as required by 40 CFR 270.14(b)(11), and traffic information as required by 40 CFR 270.14(b)(10). Specific maps and diagrams related to this information are contained in Appendices II and III.

Siemens Industry, Inc. (SII) receives spent (used) activated carbon from its customers. These spent carbons arrive at the Parker facility in a variety of containers, including: barrels, drums, portable tanks, bulk-bags, and bulk truck units. Received spent carbons are thermally reactivated in a furnace. Reactivated carbons are then shipped for recycling and/or reuse.

The November 1995 RCRA Part B permit application discussed an existing carbon reactivation furnace (RF-1) and a future second carbon reactivation furnace (RF-2) that was expected to be installed at the facility. Currently, the second carbon reactivation furnace is operational and the old carbon reactivation furnace was shut down in June 1996, and will not be returned to service. With the exception of a RCRA Closure Plan prepared specifically for the old RF-1 unit, the RCRA Part A and Part B Permit Applications will only discuss the second carbon reactivation furnace that will continue to be abbreviated in the permit applications as RF-2.

The description that follows includes information related to this second carbon reactivation furnace (RF-2).

B.1.1 FACILITY OVERVIEW

Spent carbon slurry is fed from the Furnace Feed Tank (T-18) into a dewatering screw where the carbon is dewatered prior to introduction into the carbon reactivation furnace (RF-2). Water from the dewatering screw is returned to the recycle water storage tank. RF-2 is a multiple hearth furnace consisting of five hearths. The spent carbon is introduced into the top hearth and flows downward through the remaining four hearths. Reactivated carbon exits the bottom hearth through a cooling screw. Natural gas burners are provided to ensure adequate heat input to the reactivation unit for all of the spent carbons that are reactivated at the facility. The hot gases generated in RF-2 are routed to an afterburner to ensure the thermal oxidation of organic matter that is not oxidized in the reactivation unit. The afterburner is equipped with two burners that utilize natural gas as the fuel source. From the afterburner, the gases are quenched by direct water contact and routed through a variable throat venturi scrubber for particulate matter control. From the venturi scrubber, the gases are routed to a packed bed scrubber for acid gas control. From the packed bed scrubber, the gases flow through a wet electrostatic precipitator, used for fine particulate matter and metals control. From the wet electrostatic precipitator, the gases are routed

through a stack to the atmosphere. The motive force for moving the gases through the air pollution control system is supplied by an induced draft fan. The air pollution control equipment uses a recycle water system. Scrubber blowdown from RF-2 air pollution control equipment is treated in an exempt wastewater treatment unit, or discharged directly to the POTW. A detailed discussion of the facility can be found in Section D.

B.2 GENERAL DESCRIPTION

B.2.1 NATURE OF BUSINESS

The Siemens Industry, Inc. Parker, Arizona facility is a carbon reactivation facility. Activated carbon is utilized in treatment equipment for the removal, by adsorption, of organic compounds from liquid and vapor phase process and waste streams. The activated carbon becomes spent after a period of usage. Spent means that the activated carbon has reached its adsorptive capacity for that particular application and waste stream. Once the activated carbon is spent, it must either be disposed of or reactivated at a facility such as SII's Parker facility. Some of the spent carbon received at the Parker facility is designated as a hazardous waste under the provisions found in the RCRA regulations.

B.2.2 TYPES OF INDUSTRY SERVED

Activated carbon is used in treatment equipment to remove organic compounds from liquid and vapor phase waste streams. The treatment equipment is used in a wide variety of municipal and commercial applications. The industries which use this equipment include, but are not limited to, petroleum refining and marketing facilities, solvent cleaning facilities, computer manufacturing, wastewater treatment facilities, plating facilities, metal forming facilities, auto manufacturing and repair facilities, aircraft manufacturing facilities, and other facilities that generate organic waste streams. Additionally, activated carbon is used in a variety of environmental clean-up applications.

B.2.3 ONSITE FACILITIES

The hazardous waste storage and treatment components of the Parker facility consist of the following hazardous waste management areas (refer to Site Diagrams in Appendix III).

- Container Storage Area
- Spent Carbon Storage Tanks
- Carbon Reactivation Furnace and Associated Air Pollution Control Equipment

Spent carbon is received in containers and bulk tank trucks and roll-off boxes which meet the requirements of the U.S. Department of Transportation where applicable. After inspection and acceptance at the facility, the containerized spent carbon is either transferred, via a feed hopper, into one of the RCRA-regulated spent carbon storage tanks (T-1, T-2, T-5, T-6) or moved to the RCRA-regulated Container Storage Area, in the containers in which it was received, and subsequently transferred to the storage tanks via a feed hopper. The spent carbon is transferred from the feed hoppers to the storage tanks as a water-carbon slurry. Shipments received in tank trucks or roll-off boxes may be pumped as a water-carbon slurry from the transport vehicle into one of the four spent carbon storage tanks directly, or via a feed hopper.

From the spent carbon storage tanks the water-carbon slurry is pumped to the reactivation unit feed tank (T-18). Prior to introduction into the RCRA-regulated carbon reactivation furnace (RF-2), the water-carbon slurry is dewatered by use of a dewatering screw. The dewatered carbon is then fed, via a weigh belt, to the reactivation unit. The water generated in the dewatering step is returned to the recycle water tank (T-9) where it will be reused in the carbon transport system. Because T-9 is used to store recycle water, which is water (material) used repeatedly for the same purpose without having to be reclaimed, this tank is not a RCRA-regulated unit. Once the spent carbon is introduced into the reactivation unit, it is heated to remove moisture, desorb contaminants, and reactivate the carbon. Reactivated product is discharged to a cooling screw and is transferred to the screening process and placed in appropriate containers for shipment. Currently, the packaging and shipping of the reactivated product is performed on-site.

Many of the contaminants desorbed from the carbon in the reactivation unit are thermally destroyed in the high-temperature environment of the reactivation unit. In order to ensure adequate destruction and removal of any remaining contaminants the reactivation unit has been equipped with an afterburner. The afterburner thermally oxidizes organic pollutants remaining in the off-gas stream from the reactivation unit. The reactivation unit is also equipped with add-on air pollution control equipment. A venturi scrubber is provided for particulate matter control, and a packed-bed scrubber is provided for acid gas and particulate matter control. A wet electrostatic precipitator is provided for additional particulate matter control.

Scrubber blowdown generated from RF-2 air pollution control equipment is treated in an exempt wastewater treatment unit (as per 40 CFR 264.1(a)(6) and 270.1(c)(2)(v)), prior to discharge to the POTW. The discharge to the POTW is continuously monitored for pH, total dissolved solids, flow, and temperature to ensure compliance with the discharge limitations found in the facility's current industrial wastewater discharge permit.

All hazardous waste storage and treatment areas at the facility are surrounded by secondary containment systems. Any precipitation that falls within the containment area is collected in a sump and is either placed in a recycle water tank where it is used as makeup or discharged to the POTW.

A more detailed description of the design and operation of the facility can be found in Section D.

B.3 TOPOGRAPHIC MAP

A Topographic Map is provided in Appendix II. The map shows 10-foot elevation contour intervals for a distance of 1000 feet around the facility.

B.3.1 GENERAL REQUIREMENTS

The Topographic Map, in conjunction with other figures in Appendix II and Appendix III, provide the necessary information to meet the additional general requirements listed in 40 CFR 270.14. These items are discussed below:

Scale and Date
The scale on the close-up facility topographic map (Drawing 1541-CM-001, in Appendix III) is 1 inch equals 90 feet, which satisfies the regulatory requirement for a scale of 1 inch equals 200 feet, or less. A date is provided on the map.

100 Year Flood Plain Area
The 100 year flood plain area is discussed later in Section B.4.2. A floodplain map is provided in Appendix II.

Surface Waters
The Topographic Map provided in Appendix II identifies the surface waters and intermittent streams at the facility.

Surrounding Land Use
A Peripheral Land Use Study Diagram, for the Colorado River Indian Tribes Land, provided in Appendix II, identifies the land uses surrounding the facility.

Wind Rose
A wind rose is provided in Appendix II that identifies the prevailing wind speeds and direction.

Map Orientation
The Topographic Map provided in Appendix II identifies the map orientation.

Legal Boundaries
The legal boundaries for the facility are identified in the legal description provided in Appendix II.

Access Control
The treatment process and operating areas of the facility are surrounded by a fence. All gates and entrances are monitored and locked. Appendix III provides a General Site Plan showing the fence, gates, and building entrances. Access control is discussed in further detail in Section F.

Injection and Withdrawal Wells
There are no injection or withdrawal wells on the property or within 1000 feet of the facility, as shown on the Topographic Map provided in Appendix II.

Buildings and Other Structures
Appendix III presents a General Site Plan showing buildings and other structures (e.g., runoff control systems, access and internal roads, storm, sanitary, and process sewerage systems, loading and unloading areas, fire control facilities, etc.) located at the facility.

Drainage and Flood Control Barriers
The facility is located outside the 100-year floodplain (see Section B.3(b)). The hazardous waste storage and treatment operations, and associated equipment are located within secondary containment which prevents the release of hazardous wastes or hazardous waste constituents to the environment, as well as protecting it from contact with surface waters.

Location of Treatment or Disposal Unit and Decontamination Areas
Appendix III presents a General Site Plan and specific process area drawings showing the location of container storage, tank storage, and the components of the RF-2 carbon reactivation furnace (miscellaneous thermal treatment unit) within the facility.

Location of Solid Waste Management Units
The identification and location of the solid waste management units at the facility are provided in Section J.

B.3.2 ADDITIONAL INFORMATION ON THE TOPOGRAPHIC MAP FOR LAND DISPOSAL FACILITIES

Siemens Industry, Inc. does not operate a land disposal facility. Therefore the additional requirements identified in the regulations at 40 CFR 270.14(c) are not applicable.

B.4 LOCATION INFORMATION

B.4.1 SEISMIC CONSIDERATIONS

The facility is located in La Paz County, Arizona near the city of Parker. The facility is located within the Colorado River Indian Tribes (CRIT) reservation lands. Therefore, CRIT has political jurisdiction over the land. La Paz County, Arizona is not listed in 40 CFR 264 Appendix VI, and therefore, compliance with 40 CFR 264.18(a), Seismic Considerations, is not required.

B.4.2 FLOODPLAIN STANDARD

The facility is not located within a 100-year floodplain. Data supporting this fact was taken from the Flood Insurance Rate Map for the Colorado River Indian Reservation. This map is provided in Appendix II. Therefore, compliance with 40 CFR 264.18(b), Floodplains, is not required.

B.5 TRAFFIC INFORMATION

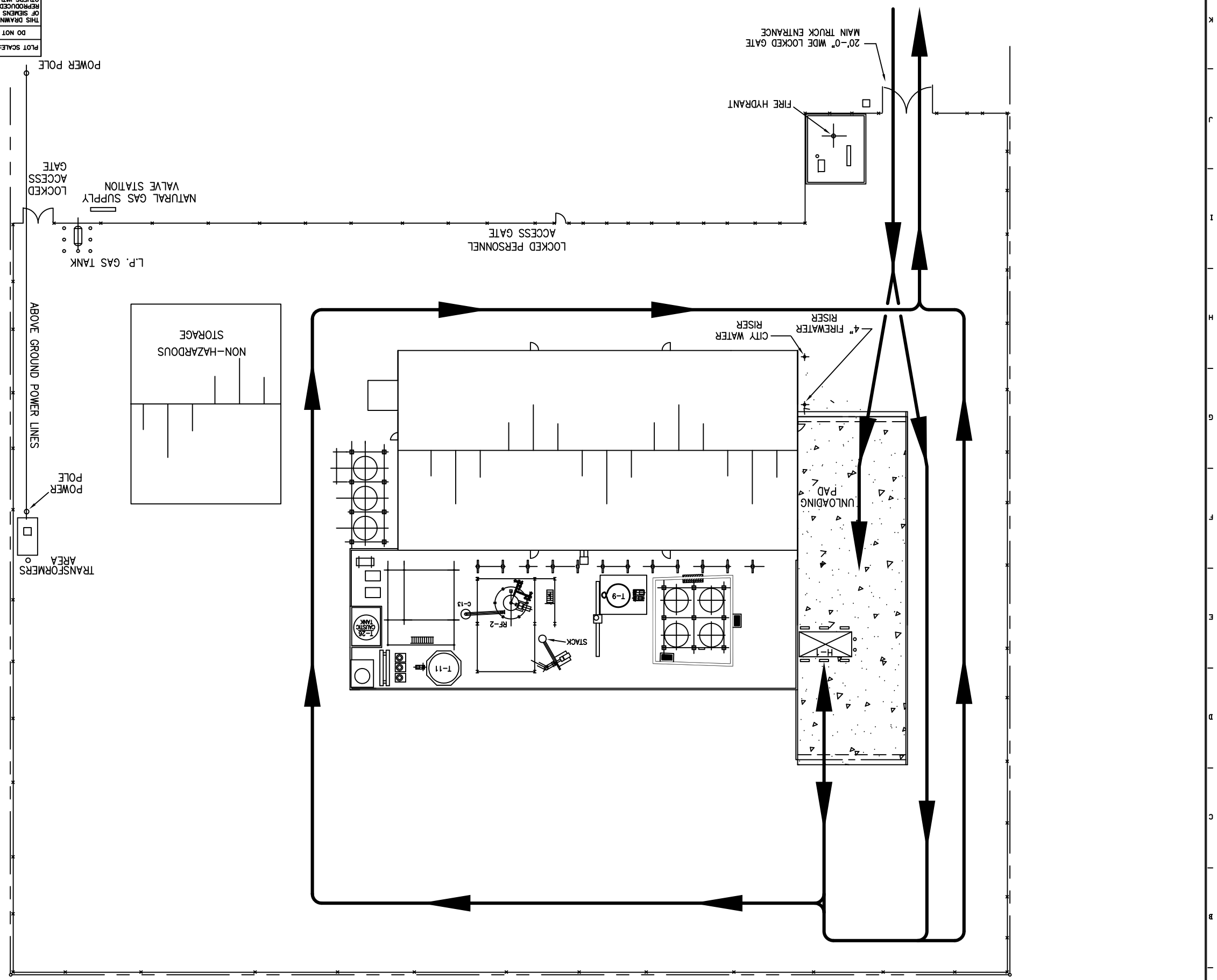
Trucks are used to transport spent carbon to the facility either in containers or in bulk shipments. The access road to the facility intersects Mutahar Street. Mutahar Street can be accessed from Arizona Highway 95. Currently, an average of 2 to 3 loads (20,000 to 30,000 pounds/load) of spent carbon will be received at the facility in any one day and an average of 14 loads will be received in any one week. The average truck traffic associated with product shipments corresponds approximately 1:1 with spent carbon deliveries.

Trucks approach the facility gate on the access road. The truck driver must stop at the gate and present the appropriate documents for inspection by SII management. Once it is determined that the documentation is in order, the truck proceeds to the spent carbon unloading area.

If the truck is transporting spent carbon in containers, the containers are unloaded, inspected, and sampled. Based on the results of the inspection and analysis of the sample, the load will either be accepted or rejected. If the load is rejected, the containers are reloaded on the truck and the truck exits the facility. If the load is accepted the truck is free to leave.

If the truck is transporting spent carbon in bulk, the load is inspected and sampled. Based on the results of the inspection and analysis of the sample, the load will either be accepted or rejected. If the load is rejected the truck exits the facility. If the load is accepted the truck is unloaded and then is free to leave. Figure B-1 shows the traffic pattern within the facility. The access road is currently constructed of asphalt paving and is capable of supporting vehicles up to 80,000 pounds.

Figure B-2 is a map showing the routes truck traffic can take to the facility from the point where it leaves the nearest major highway (Arizona Highway 95). The access roads are capable of supporting vehicles up to 80,000 pounds.



NOTES:
1. THIS DRAWING INCLUDES COMPONENTS OF THE FACILITY THAT ARE EXEMPT FROM PERMITTING UNDER VARIOUS PROVISIONS OF RCRA. DATA RELATED TO THESE COMPONENTS IS PROVIDED FOR INFORMATIONAL PURPOSES AND EASE OF REVIEW ONLY, AND THEY ARE NOT INTENDED TO BECOME REGULATED COMPONENTS OF THE HAZARDOUS WASTE FACILITY.

REV.	DATE	REVISION DESCRIPTION	DRAWN	CHK'D	ENG'R
1	3/16/12	NAME CHANGED TO SIEMENS INDUSTRY, INC.	JBE	KEM	

CUSTOMER:
SIEMENS INDUSTRY, INC.

LOCATION:
2523 MUTAHAR ST.
PARKER, AZ 85344

PROJECT No.

DRAWN:	JBE	2/6/07
CHK'D:	KEM	2/6/07
ENG'R:		

PART No. | DWG No. D147789-09 | REV. 1

TITLE:
FIGURE B-1
ON-SITE TRAFFIC PATTERN

SIEMENS INDUSTRY, INC.
Parker, AZ

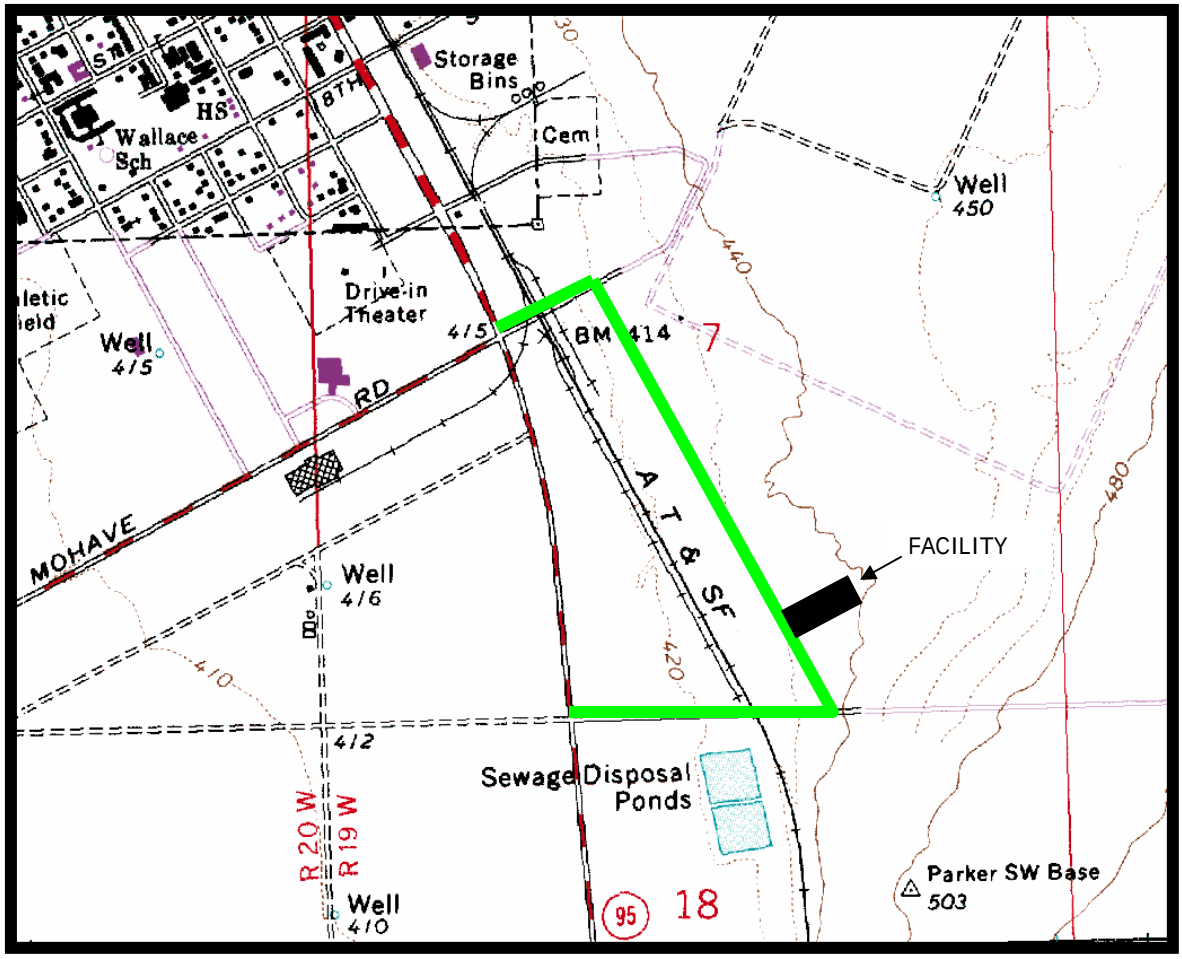
PLOT SCALE: NONE

DO NOT SCALE DRAWING

PRINT DATE: 4/19/12

DWG: D147789-09

FIGURE B-2
TRANSPORTATION ROUTES



LEGEND:

INDUSTRIAL PARK ACCESS ROAD (MUTAHAR STREET)

MAIN HIGHWAY (ARIZONA HIGHWAY 95)