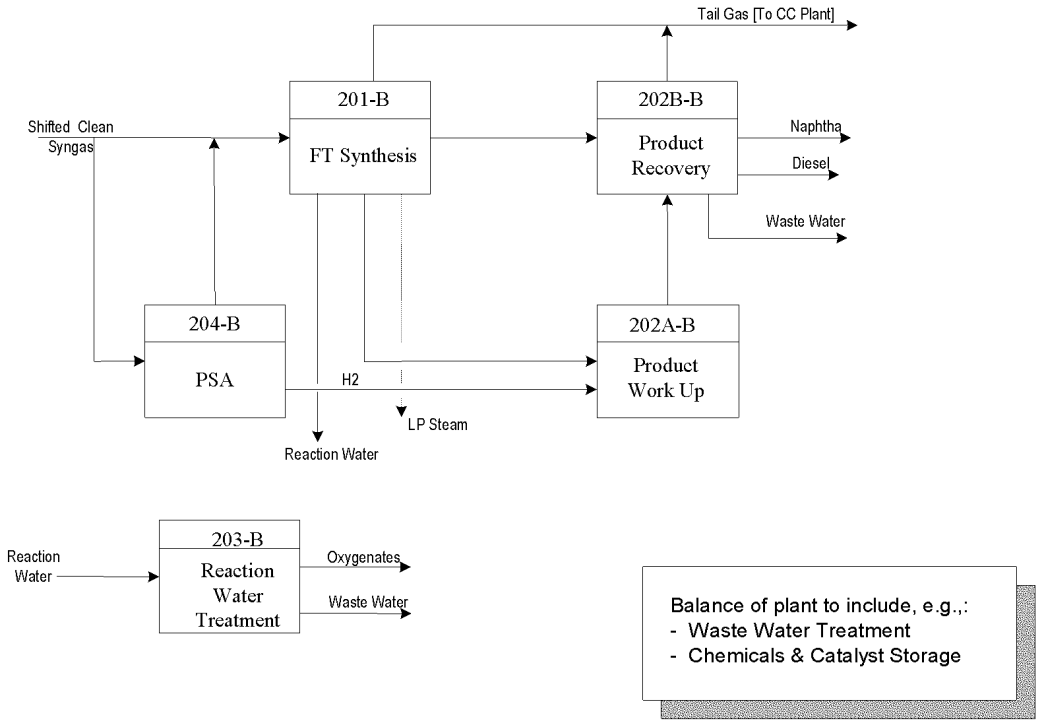
Figure 2-15 EECP Block Flow Diagram – Fischer Tropsch and Product Work Up Section



2.2.2 Preliminary EECP Plant Balance Summary

Preliminary plant balance for the Base Case EECP is given below. It is subjected to update upon receiving the final feasibility process package of the gasification and FT Synthesis & Product Workup section from Texaco and Sasol respectively.

CONSUMABLES :	
==========	
Dry Coal Feed, Ton/day	3,534
Fluxant, Ton/day	246
Oxygen Feed, Ton/day (100% O2 Basis)	3,312
LP Nitrogen Feed, Ton/day	397
Makeup Water from Mine Pool, GPM	2,366
Makeup Water from Well, GPM (1)	1,403
Makeup MeOH, Lb/Hr	557
M/U NG to GT & Thermal Oxid, MMSCFD	0.00
PRODUCTS:	
=========	
Upgraded FT Diesel, BPSD	3,747
Stabled FT Naphtha, BPSD	1,286
Liquid Sulfur, STPD (99.8% Recovery)	13.4
Slag & Ash, STPD Dry (Incl C)	1,004
Net Power Export, MWe	25.5
Net 300 PSIG/590 F Stm Export, LB/Hr	0
Fuel Gas Export, MMBtu(HHV)/Hr	0

OPERATION SUMMARY:	
==========	
% Original Texaco Thruput	100.0
% Syngas Bypassing Sour Shift	64.29
% Syngas Loss in Gasification Block	0.00
% Syngas Bypassing FT Plant	0.0
Sasol Syngas Feed H2/CO Ratio	1.4675
PSA H2 Plt Feed, % F-T Syngas Feed	4.759
F-T Plt Thruput, % Sasol Refer Case	100.1
GROSS POWER GENERATION, kWe :	
==========	
Gas Turbine Power	87,386
Steam Turbine Power	44,562
Generator Loss	(7,203)
----------	----------
Turbo-Set Power	124,745
Fuel Gas Expander Power	0
Expander Generator Loss	0
----------	----------
Net Expander Power	0
Gross Plant Power	124,745
AUXILIARY LOAD CONSUMPTION, kWe:	
==========	
Coal Beneficiating & Slurry Prep	4,209
Texaco Gasification	2,002
Syngas Cooling	270
Air Separation Plant	54,454
Oxygen Compression	0
H2S Acid Gas Removal (Amine)	0
H2S/CO2 Acid Gas Removal (Rectisol)	15,661
Sulfur Recovery/Tail Gas Treating	105
Sour Water Stripper Pumps & Air Coolers	79
Sasol FT Synthesis & Product Upgrade	8,554
High Pressure Boiler Feed Pumps	3,331
Low Pressure Boiler Feed Pumps	
Surface Condenser Condensate Pumps	57
Makeup Water Pumps	33
Cooling Water Circulation Pumps	4,588
Cooling Tower Fans	2,111
Turbo-Set Auxiliary Consumptions	490
Plt Air, N2, PSA H2, & FG Compressors	1,435
Allowance for Balance Of Plant	1,895
----------	----------
Total Auxiliary Load Consumption	99,274
NET PLANT OUTPUT, kWe	25,471

Section 3 Phase I Task 4 – Feasibility Design Package Development

Under this task, feasibility study process design packages are to be developed for the EECP gasification island, FT synthesis and offsite utility plants. With most of the major EECP processing plants already identified, Texaco has started with their Type C Feasibility Study package development. Results will be discussed in more detail in the next quarterly technical report.

Section 4 Phase I Task 5 – Market Analysis

Under this task, market analysis is to be performed to assess values of the FT products as refinery blending stocks or as finished fuels. Activities include:

1. FT Product Market Analysis –

    - Research on niche markets to obtain maximum value targets for naphtha and FT diesel, if product is trucked.
    - Demand for FT diesel as a blend stock in non-attainment areas near facility.
    - Value for FT diesel as an EPACT fuel.
    - Current market size for FT diesel as a blend stock.
    - Expected growth rates for the next 10 years for various scenarios.
    - Project current value if FT diesel product were available today.
    - Projected prices for 2005 to 2020.
    - An analysis of transportation options and cost.

2. Refinery Modeling and Recommendations – Identify/recommend two target refineries for FT product considerations. Linear programming modeling of these candidate refineries will be performed to establish the refinery fits for the FT products.

This task is completed by Purvin & Gertz, Inc. under a subcontract to Texaco. Final report was delivered to WMPI. The report contains sensitivity business information that WMPI would prefer not to report it in writing. Under an agreement, DOE can review the report and its findings with WMPI.

Section 5 Phase I Task 6 – Preliminary Site Analysis

As part of Task 6, Nexant, with support from Bechtel personnel, examined alternative modes for transporting large process vessels to the EECP site near the existing Gilberton cogen plant. Sasol's slurry phase FT reactor is expected to be over 18 feet in diameter. Its dimensions and weight are important parameters governing how the vessel should be most cost effectively fabricated and transported to site.

5.1 EECP Large Vessel Transportation Assessment

The FT reactor is the single largest piece of equipment in the EECP design, and thus is used for the analysis. Three alternatives were examined in coordination with design and cost estimating being performed in another task. The first alternative is a single shop fabricated large reactor; the second is two smaller shop fabricated reactors, and the third is a single field assembled large reactor.

The reactors' size and weight data as listed below.

- A single shop fabricated reactor -18.5 feet inside diameter by 60 feet long. The weight is approximately 300 short tons.
- Two smaller shop fabricated reactors -13 feet inside diameter by 60 feet long. The weight is approximately 120 short tons each.
- A single vessel fabricated for field assembly. Six 18.5 feet inside diameter rings, each 10 feet long, are specified for onsite welding and installation. In addition to the 6 rings there are 2 heads at 80,000 to 100,000 pounds each.

As part of the assessment, a trip was made to the Gilberton site to define the transportation routes and the costs of transporting one large shop fabricated reactor versus 2 smaller shop fabricated reactors to the plant in Gilberton, PA. Also, the feasibility and costs are estimated for the overland transportation of the large reactor in multiple ring sections for onsite field assembly and pressure testing.

5.1.1 Proposed EECP Site Location and Conditions

Location: The proposed EECP site is located near Gilberton, PA, north of Interstate 81 and east of Pennsylvania State Highway 61, off Morea Road, approximately 2 miles east of Highway 61 where it enters Frackville, PA. (See attached Maps of Figures 5-1 and 5-2)

Site Features: The site is a Greenfield location at the edge of the Gilberton Power Company's existing plant. Transportation disruptions to normal Gilberton plant operations can be minimized by routing all the construction related traffic via the access road outside the front gate to the east of the plant.

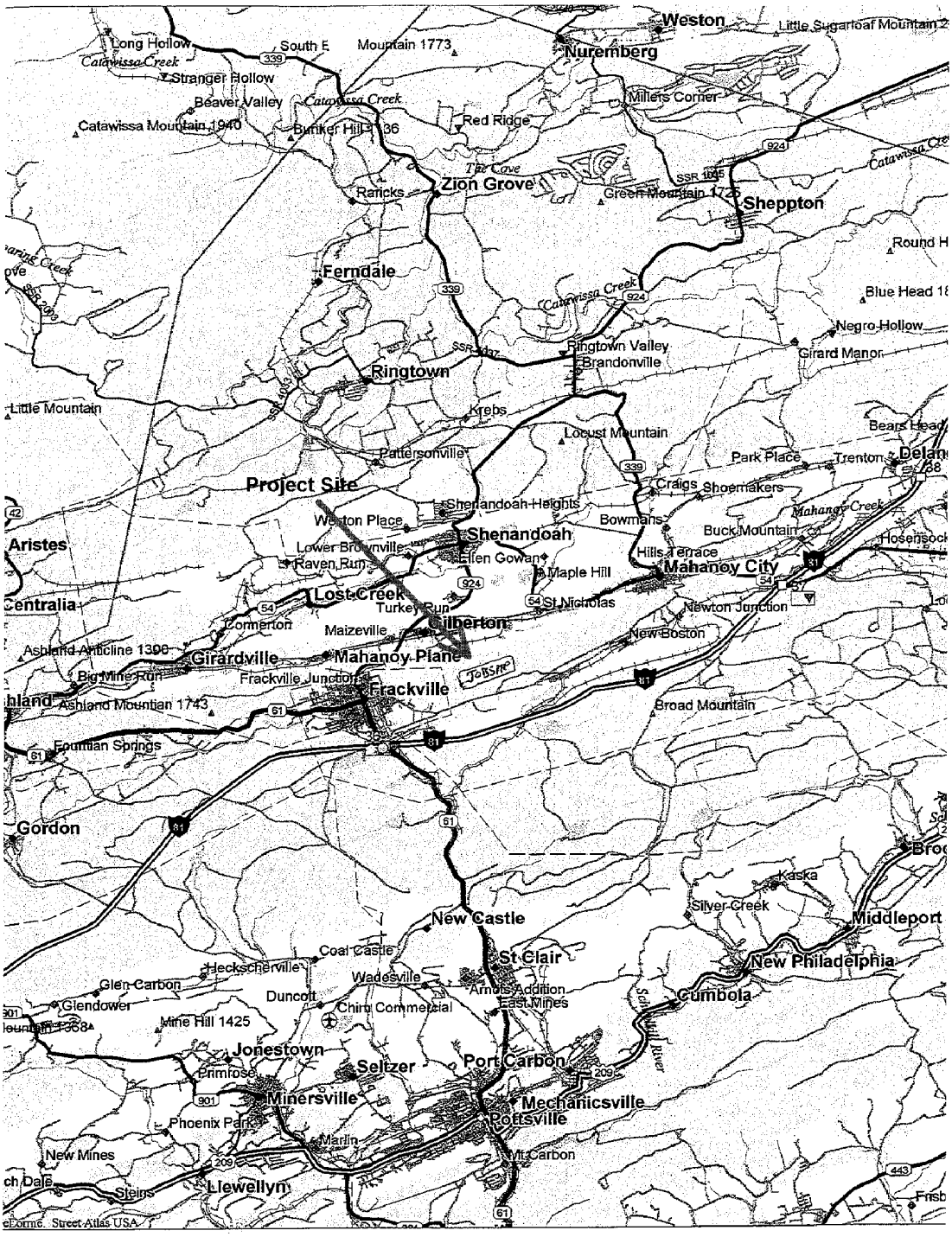

Weston
Little Sugarloaf Mountain
Nuremberg
Long Hollow
South E
Mountain 1773
Catawissa Creek
Stranger Hollow
Beaver Valley
Catawissa Creek
Millers Corner
Catawissa Mountain 1940
Bunker Hill 1136
Red Ridge
924
The Cove
Zion Grove
Ranicks
SSR 1045
Green Mountain 1725
Sheppton
Round H
Ferndale
339
Catawissa Creek
924
Blue Head 18
Negro Hollow
Ringtown Valley
Brandonville
Girard Manor
Ringtown
Little Mountain
Krebs
Locust Mountain
Bears Head
Pattersonville
Park Place
Trenton
Project Site
339
Craigs Shoemakers
Shenandoah Heights
Mahanoy Creek
Weston Place
Bowmans
Buck Mountain
Shenandoah
Aristes
Lower Brownville
Ellen Gowan
Hills Terrace
Raven Run
Maple Hill
Mahanoy City
924
Lost Creek
Turkey Run
St Nicholas
Newton Junction
Centralia
Cormerton
Gilberton
Maizeville
New Boston
Ashland Anticline 1300
Girardville
Mahanoy Plane
Big Mine Run
Frackville Junction
Jobs Run
Frackville
Ashland Mountain 1743
Broad Mountain
Fountain Springs
Gordon
Kaska
Silver Creek
New Castle
Middleport
Coal Castle
St Clair
New Philadelphia
Hecksherville
Wadesville
Glen Carbon
Amots Addition
East Mines
Cumbola
Glendower
Duncott
Chiru Commercial
Mine Hill 1425
Jonestown
Seltzer
Port Carbon
Primrose
Minersville
Mechanicsville
Pottsville
Phoenix Park
Marlin
New Mines
Mt Carbon
Llewellyn
Steins
Street Atlas USA

Figure 5-1

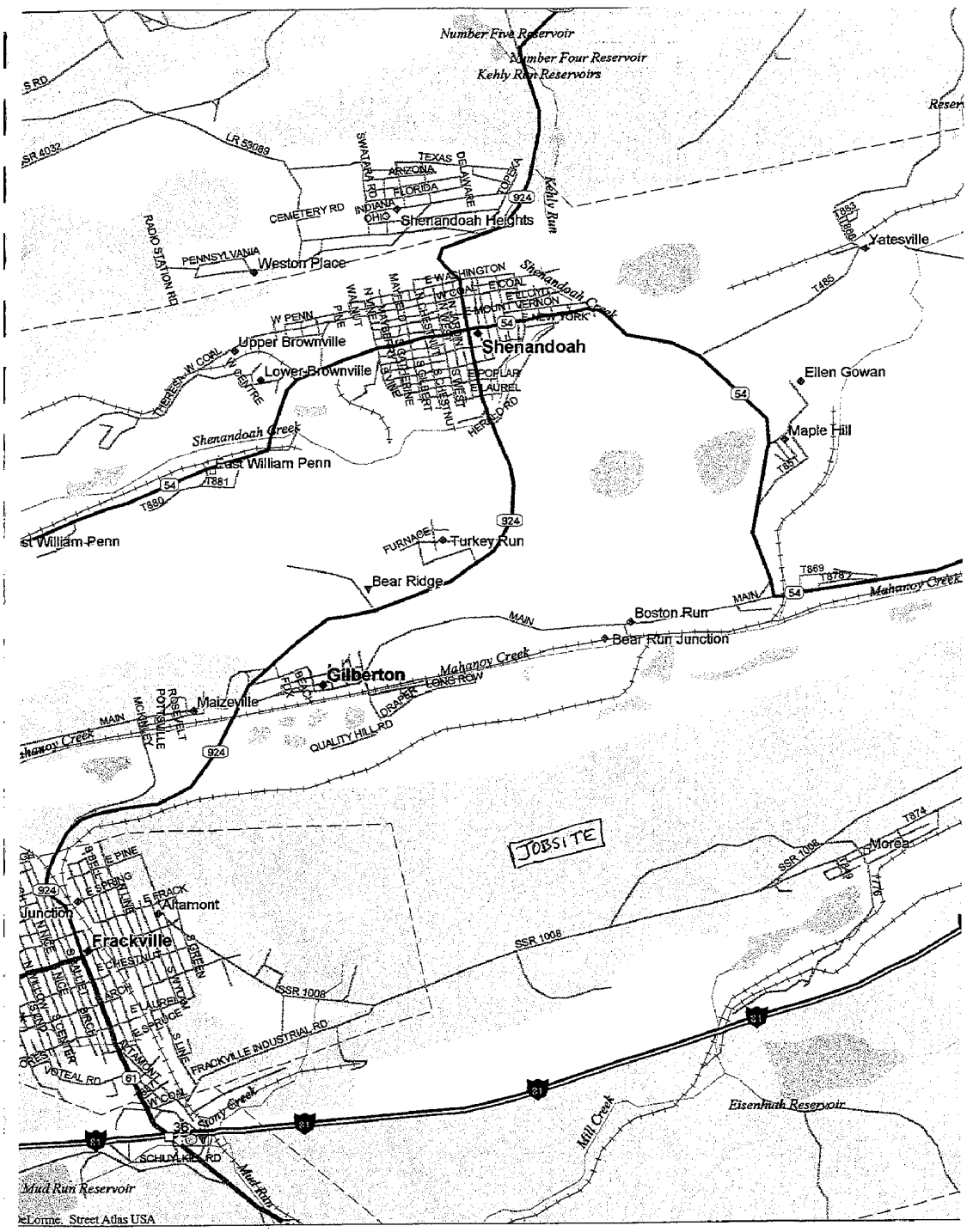

Number Five Reservoir
Number Four Reservoir
Kehly Run Reservoirs
Kehly Run
Shenandoah Heights
Weston Place
Yatesville
Shenandoah Creek
Upper Brownville
Lower Brownville
Shenandoah
Ellen Gowan
Maple Hill
East William Penn
Turkey Run
Bear Ridge
Boston Run
Bear Run Junction
Mahanoy Creek
Gilberton
Maizeville
QUALITY HILL RD
JOBSITE
Morea
Aramont
Frackville
SSR 1008
FRACKVILLE INDUSTRIAL RD
Eisenhuth Reservoir
Mill Creek
Stony Creek
Mud Run
Mud Run Reservoir
SCHUYLKILL RD
VOLTEAL RD
MAIN
924
54
61
81
DeLorme. Street Atlas USA

Figure 5-2