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TECHNICAL PROGRESS REPORT NO. 2

MICRONIZED COAL-FIRED RETROFIT SYSTEM FOR SO_x REDUCTION

Krakow Clean Fossil Fuels and Energy Efficiency Program

Prepared for

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DISCLAIMER

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1.0 EXECUTIVE SUMMARY

The PROJECT proposes to install a new TCS micronized coal-fired heating plant for the Produkcja I Hodowla Roslin Ogrodniczych (PHRO) Greenhouse Complex; Krzeszowice, Poland (about 20 miles west of Krakow). PHRO currently utilizes 14 heavy oil-fired boilers to produce heat for its greenhouse facilities and also home heating to several adjacent apartment housing complexes. The boilers currently burn a high-sulfur content heavy crude oil, called Mazute.

For size orientation, the PHRO Greenhouse complex grows a variety of vegetables and flowers for the Southern Poland marketplace. The greenhouse area under glass is very large and equivalent to approximately 50 football fields.

The new micronized coal fired boiler would: (1). provide a significant portion of the heat for PHRO and a portion of the adjacent apartment housing complexes, (2). dramatically reduce sulfur dioxide air pollution emissions, while satisfying new Polish air regulations, and (3). provide attractive savings to PHRO, based on the quantity of displaced oil.

TCS, Inc. has maintained primary project development responsibilities for implementation and will supply its micronization equipment system to the PROJECT. Other key U.S. equipment suppliers will include:

* Babcock & Wilcox; Barberton, Ohio and Warsaw, Poland ("boiler-island")
* Amerex, Inc.; Woodstock, Georgia (fabric filter)
* Control Techtronics International; Harrisburg, Pa. & Krakow, Poland (control system).

Currently, the Town of Krzeszowice is considering a district heating program that would replace some, or all, of the 40 existing small in-town heating boilers that presently burn high-sulfur content coal. Potentially the district heating system can be expanded and connected into the PHRO boiler network; so that, PHRO boilers can supply all, or a portion of, the Town's heating demand. The new TCS micronized coal system could provide a portion of this demand.

The TCS system potentially could provide several important advantages to PHRO and the Town of Krzeszowice, including: (1). displace a portion of the coal use and reduce a portion of the air emissions resulting from the existing small in-town coal fired boilers, (2). establish "ground-work" for installing a "second" TCS system to displace all of the remaining coal use and reduce all of the remaining existing air emissions resulting from the 40 small in-town coal fired boilers, (3). reduce sulfur dioxide emissions from existing PHRO and Town sources, and (4). provide attractive savings to PHRO, based on the quantity of oil displaced.

Micronized coal is coal micro-pulverized to a particle size consistency similar to a very fine talcum powder. Because of its micron-size particle distribution, micronized coal has unique combustion characteristics that are similar to those associated with oil. Reasons for the similarity to oil, is that micronized coal has: (a). high combustion reactivity, (b). earlier combustion completion, and (c). minimum slagging or erosion effects.

Sulfur dioxide reductions during combustion with micronized coal is possible by co-micronizing limestone with coal. Sulfur dioxide (SO_2) air emissions are reduced due to a number of synergistic causes, including: (a). intimate mixing and contact between coal and limestone particles, and (b). accelerated calcination and sulfation reactions resulting from the small particle distribution of coal and limestone.

Nitrogen oxide reductions utilizing a TCS system result primarily from: (a). lower excess air than other conventional coal combustion systems, and (b). staged combustion achieved with the proprietary Babcock & Wilcox XCL Low-NOx burner.

Carbon monoxide reductions result because of the extremely high degree of carbon burnout achieved with micronized coal.

2.0 PROGRAM INTRODUCTION

The work to be performed is part of the equipment assessment program in the Support for Eastern European Democracy (SEED) Act of 1989 (P.L. 101-179). Following the guidance of this legislation, a U.S.-Poland Bilateral Steering Committee (BSC) was established to define the program. The BSC is directing a program of assistance to Poland that would reduce air pollution in Krakow, Poland from about 1,300 boiler houses that provide heat for industrial, commercial, and residential applications, plus about 100,000 small stoves for home heating. The 1,300 boiler houses and 100,000 home heating stoves in Krakow primarily utilize solid fossil fuels and have been collectively called "low emissions sources" because of their low stack heights and the consequent low elevation entry of flue gases into the ambient air.

In October 1991, a Memorandum of Understanding (MOU) was signed by the U.S. Department of Energy (USDOE) and the Ministry of Environmental Protection, Natural resources and Forestry of the Republic of Poland. The MOU is titled, "Collaboration on the Krakow Clean Fossil Fuels and Energy Efficiency Program, A Project of Elimination of Low Emission Sources in Krakow." This MOU describes the cooperation that is being undertaken by the governments of the United States and the Republic of Poland to accomplish this program. Funding for the program is being provided through the Agency for International Development (AID).

The purpose of the program is to encourage the formation of commercial ventures between U.S. and Polish firms to provide equipment and/or services to reduce pollution from low emission sources in Krakow, Poland. These commercial ventures may take the form of contracts, joint ventures, partnerships, or any other commercially feasible arrangements that accomplishes the purposes of the statute.

Project development support includes all activities that must be accomplished by U.S. organizations and their proposed team members before the enterprise can expect to receive revenues from its activities in Krakow. These activities may include efforts to determine how to establish a U.S.-owned business in Poland, identify the Polish regulations relevant to the proposed project, conduct marketing studies, identify facilities and a labor force for the venture, and acquire a manufacturing plant. The proposed activities may also include the construction and testing of equipment to be sold (e.g., furnaces) or to produce a fuel to be sold. The proposed activities may utilize Polish fuels, as appropriate, to confirm technical feasibility.

The assistance provided is through cost-shared cooperative agreements between the USDOE and U.S. companies. Participation of Polish firms through teaming arrangements with U.S. proposers, while not required, is strongly encouraged. Fifty percent minimum cost sharing is required.

The work to be conducted as part of the project described herein involves the installation of a new TCS micronized coal-fired heating plant for the Produkcja I Hodowla Roslin Ogrodniczych (PHRO) Greenhouse Complex; Krzeszowice, Poland. The facility will include: (a). new coal and limestone storage silos, (b). TCS Coal Micronization System, (c). Babcock & Wilcox "boiler island", (d). Amerex fabric filter (baghouse), (e). Control Techtronics International control system, and (f). balance of plant and equipment supplied by various Polish engineering design and construction companies and equipment suppliers.

Primary objective will be to: (a). provide significant reductions in air pollution emissions for PHRO, (b). demonstrate an important U.S. Clean Coal Technology utilizing Polish coal and limestone, and (c). lower PHRO's operating costs.

TASK ACCOMPLISHMENTS

Task 1: Coordination, DOE Liaison, Reports, Financial Management
TCS has maintained communications and liaison between U.S. Department of Energy (USDOE) and all PROJECT participants and is responsibility for coordination, preparation of reports and financial management and administration of Budget Period I of the PROJECT.

Task 2: Confirm Site Criteria
This task is complete and involved verification of key operational and siting criteria at PHRO. At the project's start-up, TCS prepared and sent to PHRO a comprehensive list of required information that would describe: (a). operational data, (b). plant layout, and (c). configuration of existing equipment and building facilities. This included: typical daily and seasonal thermal load profiles, boiler mass-energy flow throughput, peak and average required heating loads, other material and mass balance data verification, existing instrumentation and control, and location drawings of existing equipment especially at points of interface with new equipment. PHRO secured this information, which was sent to TCS.

Task 3: New Equipment Specification
This task is complete and involved analyzing information from Task 2 to determine, on a preliminary basis, design and performance criteria for new equipment requirements, including: (a). capacity and number of TCS mill(s), Babcock & Wilcox XCL Low-NO_x burner(s) and boiler(s), Amerex baghouse(s), (b). coal, limestone and ash handling and conveying equipment and modifications, (c). mechanical equipment such as fans, air compression, boiler modifications, ductwork, and (d). control and monitoring equipment.

A detailed energy consumption profile was evaluated to determine the optimum size boiler for application at PHRO, resulting in a boiler capacity of about 12 MWt (i.e., about 40,000 lb/hr) steam capacity. This boiler size established fuel input and heat output criteria for the facility.

Task 4: Conceptual Plan and Preliminary Site Layout
This task is complete and involved development of a conceptual plan and preliminary site layout with "focus" on identifying potential "problem areas" of the Project and issues which were discussed and considered by PHRO during site visits by TCS in April and June 1996.

TCS produced site, plan and sectional drawings of new equipment in relation to existing facilities and siting requirements. Likewise, schematic one-line drawings and logic diagrams were prepared with sufficient detail to present a preliminary understanding of all mechanical, electrical, and structural systems, equipment location.

Table 1 presents a list of new equipment and facility requirements that were considered for both U.S. and Polish suppliers.

Task 5: Preliminary Financing Applications
This task is complete and involved visits and discussions with various Polish and U.S. sources of financial aid and loans to the PROJECT, including the following:

* Voivodship Fund for Environmental Protection (Krakow)
* EkoFundusz (Warsaw)

Positive response was received from both organizations.

PHRO plans to submit a formal proposal to the EkoFundusz by the end of November 1996 for an anticipated grant approval of about 30 percent of the PROJECT cost.

Depending on final costing of the PROJECT, PHRO may apply for a Voivodship Fund loan, which could possibly provide debt financing for a portion or the PROJECT cost, at lower than market rates. Likewise, it is possible that up to 50 percent of the principal of the loan could possibly be forgiven after three years of operation, if all environmental standards are satisfied.

Babcock & Wilcox has indicated that, if necessary, assuming the PROJECT is financially viable, that it is possible that B&W could arrange financing through its sources, and in effect, provide an extended payment program plan.

Table 1: PHRO GREENHOUSE - PRELIMINARY MATERIALS & EQUIPMENT LIST

EQUIPMENT SUPPLY BY U.S. VENDORS ----------

No. ITEM

1 TCS CM32C micronization mill, no motor, spare rotor, parts package
... includes: temperature, vibration & oil lubrication sensors & controls
... includes: TCS metal detection/rejection system.

2 Babcock & Wilcox FM-117-97 package boiler (12 MWt @ 1.65 MPa, 200 degC)
... includes: burner, FD fan, boiler trim, sootblowers, furnace floor puffer system
... includes: steam coil air heater.

3 Amerex REX-pulse Model RP-14-224/256 D6 fabric filter (7.1 kg/sec @ 150 degC)
... includes: ash screw conveyor, water spray nozzel, ash valve
... includes: I.D. fan (7 kg/sec @ 150 degC @ .75 kPa)
... includes: steel stack (0.7 mt diameter, 17 mt. height)

4 Control Techtronics International burner mangagement & boiler control system.

EQUIPMENT SUPPLY BY POLISH VENDORS ----------

1 Loading hopper, screw conveyor -to- bucket elevator
2 15 mt. bucket elevator w/. directional flap gate at top.
3 22 mt-ton limestone, concrete stave storage silo, air blasters, shutoff valve
4 90 mt-ton coal, concrete stave storage silo, air blasters, shutoff valve.
5 Coal screw conveyor to TCS mill (1.8 mt-ton/hr, 4 mt length)
6 Limestone screw conveyor to TCS mill (0.12 mt-ton/hr, 3 mt length)
7 Motor for TCS mill (100 Kw)
8 Flue gas ducting (30 mt Length x 600 mm diam) plus fittings
9 Shell/tube heat exchanger (two-zone)
Shell side = 18,500 kg/hr @ 200 degC steam-to-condensate
Tube side = 130,000 kg/hr @ 40 degC cool side -to 115 degC hot side
10 Deaerator (4,000 kg storage tank)
11 Flash economizer
12 Boiler feed pum (20,000 kg/hr)
13 Piping (REF: attached piping list)
14 Air compressor system, dryer, filter
15 Motor control center (REF: motor list)
16 Electrical wiring, misc. electrical components.
17 Concrete slab for building (14 mt x 10 mt)
18 Foundations (materials receiving hopper, coal silo, limestone silo,
... fabric filter, boiler, TCS mill, oil storage tank.
19 Prefabricated metal building (9.5 mt W x 13.5 mt. L x 6.5 mt. H)
20 Auxiliary oil storage tank, skid mounted pumping, piping, valves, fittings

21 Labor to install U.S. Supplied equipment
22 Labor to install Polish Supplied equipment

23 Final Engineering design
24 Construction Management

24 Contingency

26 TOTAL CONSTRUCTION COST

Task 6: Preliminary Legal and Financial Comparison
This task is partially complete, pending final cost estimates and financial proformas for the PROJECT.

Task 7: Select Polish Engineering and Construction Management Firm
This task is underway and partially complete. Initially Babcock & Wilcox had screened a number of Polish engineering companies and had indicated a desire for working with Energoprojekt-Katowice (EPK). EPK is a Polish engineering firm, based in Katowice, Poland and heavily experienced in powerplant design and construction.

In April and June 1996, TCS visited with EPK personnel to discuss the technical requirements of the PROJECT. EPK agreed to provide cost estimates for the Polish supplied portion of the PROJECT (at no cost to the PROJECT) with an understanding it would be the designated firm for final design and construction. EPK was known and acceptable to PHRO.

Unfortunately, the cost provided by EPK in August 1996 was obviously overpriced in the opinion of TCS. This judgement was based on the fact that EPK's estimate was approximately 250 percent of what TCS estimated the cost should be, if constructed in the U.S., using U.S. labor and equipment pricing. It is generally agreed that Polish supplied equipment and labor should tally to be less than U.S. pricing, not on the order of 250 percent more.

With the assistance of BRK and PHRO, TCS intends to identify other engineering firms that would be qualified and suitable for determining the project's cost. This effort is underway. Upon selection of capable candidates, TCS will visit Poland to interview and make final selection. This visit and selection process will occur during the fourth-quarter of 1996.

Task 8: TCS Site Visits
This task is partially complete and involved multiple site visits to Poland to meet with key project participants, including: PHRO, Biuro Rozwoju Krakowa (BRK), Krakow Regional Office of the Environmental Protection Department, USAID-Warsaw, B&W-Warsaw, EkoFundusz, Voivodship Fund for Environmental Protection, KWK Coal Company, Czerna Limestone Mine, and various Polish engineering companies.

Another site visit is planned during the fourth-quarter of 1996 to interview and retain a Polish engineering company to assist in project cost determination.

Each trip involved review meetings between TCS and all key project participants to review all engineering criteria, preliminary drawings to date, technical assumptions and general project status.

Suggestions and comments for optimizing the PROJECT objectives were solicited from all personnel to ensure their operational and regulatory concerns and suggestions were adequately considered.

Task 9: Laboratory and Cost Analysis of Candidate Coal

This task is complete and involved an analyses to determine if the PROJECT should utilize either a washed (i.e., higher energy content and lower ash & sulfur contents) or unwashed (i.e., lower energy content and higher ash & sulfur contents) coal(s) that are readily available in the Krakow region.

A cost trade-off analyses was conducted to determine the optimum condition to utilize the coal (e.g., washed vs. unwashed) based on: price of delivered coal and limestone for desulfurization, effect on boiler efficiency, differences in boiler plant O&M costs, limestone consumption rates and differences, and ash disposal costs. Results indicated that a washed coal is more cost effective. In effect, although washed coal is more expensive on a cost per ton basis, its higher energy content, lower ash disposal costs, less required limestone, lower materials handling costs, and higher boiler efficiencies, results in a net overall lower cost.

During TCS's April 1996 site visit, a trip was made to the KWK Staszic Coal mine near Katowice, Poland. It was determined that, based on cost, coal characteristics, and proximity to project site, that a KWK Wesola coal is the designated PROJECT coal.

Arrangements were made to ship ten (10) tons of the KWK Wesola coal to the TCS Combustion Test Facility in Oakland, Maryland for combustion tests (described below).

An ultimate chemical analyses of the Wesola coal include the following:

*	Carbon	68.00 percent
*	Hydrogen	4.30
*	Sulfur	0.65
*	Oxygen	10.30
*	Nitrogen	1.00
*	Moisture	8.25
*	Ash	7.50
*	Total	100.00
*	Heating value	11,874 BTU/lb

Task 10: Laboratory Analysis of Candidate Limestone

This task is complete and involved a laboratory analyses of four (4) limestone sources in the general Krakow region, including: (1). Sitkowka, (2). Plaz, (3). Carbide Residue, and (4). Czerna. Samples from each of these sources was procured and sent to the Pennsylvania State University Coal Utilization Laboratory to conduct a series of chemical and physical analyses, including: (a). calcium and magnesium content, and (b). thermogravametric analysis (TGA).

Results of the analyses included:

COMPONENT	SITKOWKA	PLAZ	CARBIDE RESIDUE	CZERNA
SiO_2	0.04	6.76	2.30	2.60
Al_2O_3	0.15	1.66	1.49	0.85
TiO_2	0.01	0.07	0.05	0.04
Fe_2O_3	0.08	0.85	0.39	0.36
MnO	0.44	0.04	0.01	0.04
CaO	56.80	43.10	70.10	53.20
MgO	< 0.02	5.72	0.12	1.62
Na_2O	< 0.02	< 0.02	< 0.02	< 0.02
K_2O	< 0.02	0.61	0.05	0.08
P_2O_5	< 0.02	0.10	0.02	0.07
BaO	< 0.01	< 0.01	0.02	< 0.01
SrO	0.03	0.02	0.05	0.03
SO_3	< 0.05	< 0.05	0.40	< 0.05
LOI [**]	41.30	41.60	24.50	40.80
Ca:S Molar Ratio	1.22	1.13	1.24	1.17
Lb-Sorbent Required per lb.-Sulfur	3.8	4.6	3.1	3.9

[**] LOI = Loss On Ignition, refers to the material that volatilizes during heating. In the case of limestones, this refers to CO_2 loss during heating to 900 degC.

In its report to TCS, Penn. State indicated that the Ca:S molar ratio and lbs-sorbent/lb-sulfur for the four sorbents is well within the range of values obtained for sorbents that were successfully fired (i.e., maintained compliance for SO_2 emissions) in full-scale AFBC units. Based on Penn. State's experience, the performance (i.e., Ca:S molar ratio) of all four sorbents is well within acceptable and experimental error.

Since all four sorbents are, more-or-less, in the same range of desulfurization efficiency, the Czerna limestone was selected as the designated project coal. This decision was based on cost factors (i.e., both mine and transportation), because the Czerna limestone mine is located in Krzeszowice, Poland (about one mile from the PHRO project site).

Arrangements were made to ship three (3) tons of the Czerna limestone to the TCS Combustion Test Facility in Oakland, Maryland for combustion tests (described below).

Task 11: Combustion Tests

This task is complete and involved a series of combustion tests utilizing the KWK Wesola coal and Czerna limestone during July 1996.

The TCS Test Combustion Facility in Oakland, Maryland is equipped with the following systems:

* Solid material storage and screw-feed conveyor system.
* TCS Model CM32C micronization mill.
* Babcock & Wilcox Model XCL Low-NOx burner (modified), rated at approximately 16 MMBTU/hr. Combustion air to burner was preheated by an electric secondary air heater.
* Babcock & Wilcox Model FMD-9-34 "D"-Pattern floor mounted boiler, rated at 16,000 pph-steam @ 225 psig/SAT.
* Pulse-jet baghouse, equipped with FlexKleen filter media.
* All necessary auxiliary boiler and combustion equipment and controls.
* LAND Model 6500 Combustion Analyzer (CO, CO_2, O_2 and NO_x).
* Thermox (Ametek) Emission Monitoring System (O_2 and combustibles).

The purpose of this task was to conduct a series of combustion tests; wherein, sufficient quantities of the KWK Wesola coal was: (a). micronized and burned individually for a base line determination, and (b). co-micronized with varying quantities of the Czerna limestone and burned together.

Primary objectives were to determine: (a). desulfurization capabilities of the Czerna limestone, and (b). resulting NO_x and SO_x emissions, both without (i.e., baseline) and with limestone.

Results of the combustion tests were very successful, and in summary included the following:

	Sulfur Dioxide (g/GJ)	Nitrogen Dioxide (g/GJ)
* Baseline (no limestone):	241	163 to 207 (varied)
* With limestone (@ 2:1 Ca:S molar):	173	160 to 196 (varied)
* New 1998 Polish Emission Standards:	200	170

TCS test baseline SO_x emissions closely corresponded to those results obtained during combustion tests conducted at the Krzeslawice Boilerhouse (Krakow) by USDOE while using a KWK Staszic washed coal. KWK Staszic and KWK Wesola coals are similar in their ultimate analyses and are mined by the same company at locations very close to each other near Katowice, Poland.

During the TCS tests, with a very acceptable Calcium/Sulfur molar ratio of 2:1, the Czerna limestone and Wesola coal combination achieved 28 percent desulfurization. This reduction is more than necessary, since only 17 percent is required for the Wesola coal to meet the new Polish emission standards (i.e., from 241 g/GJ to 200 g/GJ = 17% required reduction).

During the combustion tests, the primary objective was to optimize sulfur reduction. During the TCS tests, NO_x emissions varied slightly up-and-down; however, "fine-tuning" was able to achieve the required new Polish emission standard of 170 g/GJ.

Task 12: Finalize Equipment Specification and Modifications

This task is partially complete and involves finalization of all new equipment design and performance specifications and establish key dimensions for new equipment and sub-systems, including: limestone storage silo and handling, material conveyor systems, surge bins, TCS mills and B&W XCL Lox-NOx burner, B&W boiler, bottom ash puffer system, Amerex baghouse, F.D. and I.D. fans, ash handling system, Control Techtronics control system, electrical starter and interconnect, other auxiliary subsystems. Likewise, this task will determined all necessary modification and changes required for existing equipment and support systems. This task should be completed during the fourth-quarter of 1996, prior to TCS's site visit to Poland.

Task 13: Structural and Foundation Analysis

This task is complete and involved an analyses of dead and live load weights of all new equipment and their location in reference to existing plant components, including: (a). foundations for Babcock & Wilcox boiler and Amerex baghouse, ash and sorbent silos, and (b). structural supports for TCS mill, fuel & sorbent handling and conveying, duct work and other systems.

Task 14: Design Plan

This task is partially complete and involves development of a complete mass energy balance computer program to defined the condition, temperature, pressure and enthalpy of all solid, liquid and gaseous flow lines associated with the project. Results of this program will form a basis of determining all lengths and sizing for facility pipelines and ductwork, motor sizing, etc., in addition to all key equipment requirements.

TCS believed it was necessary to develop this computer program, in order to minimize miscommunication with the designated Polish engineering firm to be determined in the fourth-quarter of 1996 (e.g., necessary to provide very detailed listing of all equipment, pipe and duct lengths, all motor ratings, etc.) to simplify the cost estimation process.

Task 15: Design Package Review

This task will be completed during TCS's planned site visit during the forth-quarter of 1996 and will involve a review of all design drawings and results of the previous tasks.

Task 16: Implementation and Installation Cost Estimates

This task is partially complete, awaiting results of project cost estimates and results of the previous task review. Purpose of this task will be to determine implementation costs for Budget Period II and include:

Permitting cost estimates.
Final construction drawings and specifications.
Equipment exported from the United States (e.g., TCS, B&W, Amerex and Control Techtronics.)
Equipment provided by Polish supplies.
Costs will be developed with detailed itemization of all major equipment components, installation and erection. Quotes will be obtained from key equipment suppliers and good engineering practice, with stated quantity takeoffs, will apply to the balance of the plant estimate.

The cost estimate will be provided in U.S. dollars. Equipment and installation activities based and provided in Poland will be estimated in Polish Zlotys and converted into U.S. dollars based on the official exchange rate prevailing on the date of submission.

Task 17: Start-up and Demonstration Operational Cost Estimates

This task will be completed upon development of Budget Period II cost estimates and implementation schedule, and will include costs associated with: coal and limestone, ash disposal, labor, chemicals and materials, support utilities and parasitic power, and water and wastewater.

Task 18: Preliminary Permit Applications

This task is partially complete and primarily involves permit requirements from: (a). Krakow Regional Office of the Environmental Protection Department, and (b). Town of Krzeszowice, Poland. Primary permits required, include:

* Preliminary application to the Krakow Regional Office of the Environmental Protection Department defining the quantities of air emissions planned from the PROJECT, and the estimates of air pollution that will be reduced by the PROJECT. USDOE contracted BRK to oversee this sub-task, which was completed in August 1996 and was submitted and accepted.

* During final design, air emission modelling will be completed to determine the ambient air emission levels in the vicinity of PHRO that result from a net displacement of pollutants reduced by the PROJECT. USDOE has contracted with BRK to oversee this sub-task, which should be conducted in the early phases of Budget Period II.

* An environmental impact statement and preliminary building permit application must be submitted to the Town of Krzeszowice, Poland. It is planned to submit this application in early-1997.

Task 19: Project Evaluation Report, Schedule and Implementation Plan
The Project Evaluation Report will contain adequate decisionmaking information to allow the USDOE, PHRO, and other project participants, to proceed into Budget Period II with confidence that the program makes technical, economic and environmental sense in the context of other available technologies. Information would include, but not be limited to: complete project description, technology overview, capital and operating costs, anticipated emission reductions, and a financial proforma cost analysis. A final "go-no/go" recommendation will be presented with a basis for its justification.

An overall schedule indicating primary Budget Period II implementation tasks and critical path items from Permitting to Project Start-up and Demonstration will be included. Likewise, an implementation plan will be described that outlines how new equipment will be installed to ensure minimum disruption to the daily operations of PHRO.