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Yellowknife Division

March 9, 1989

Marek Stephanski, Ph.D.,
Technology Coordinator,
Mineral and Energy Technology,
CANMET,
Energy, Mines and Resources Canada,
555 Booth Street,
Ottawa, Ontario K1A 0G1

Dear Dr. Stephanski:

RE: NORTHERN TECHNOLOGY ASSISTANCE PROGRAM

As discussed during our telephone conversation of March 3, Giant's Application for Assistance under the Canada/NWT Economic Development Agreement is enclosed.

It is Giant's opinion that the proposal is very worthwhile, and the results obtained from the test program might help in the transformation of what is now a liability, into a substantial new resource.

Thank you for your assistance.

Yours truly,

GIANT YELLOWKNIFE MINES LIMITED

A handwritten signature in dark ink, appearing to be "KM", is written over the company name.

Kent Morton
Technical Project Supervisor

cc: S. McAlpine
K. Blower

HIGH TEMPERATURE GAS FILTRATION PROJECT

STATEMENT OF WORK

Introduction

During the past several years, Giant Yellowknife Mines has marketed a small amount of crude arsenic trioxide produced as a by-product of the gold extraction process. Due to the poor quality of the product, the market has always been extremely limited and recently, Giant's sole customer declined to renew their purchase contract. Unless the quality of the product can be greatly improved, the product cannot be sold.

Over the past eighteen months, Giant has developed a purification process that will achieve the necessary product purity in a plant designed to control capital and operating costs at a level where a profit can be earned.

The process, sublimation of crude baghouse dust, followed by high temperature gas filtration, condensation and agglomeration, has been thoroughly proven. Detailed filtration testwork is all that remains of the research phase of the program.

Objectives

Successful completion of the filtration testwork will enable Giant Mines to detail purification plant design for the purpose of full scale production. The \$10,000,000 plant will employ 12 to 15 people and will be capable of producing 7,000 stpy of high purity product. The high temperature gas filter will help to improve product quality from approximately 65% As₂O₃ to 99.5% As₂O₃.

There are several benefits that Giant might realize from high temperature gas filtration testwork and eventual production of a high purity product. These potential benefits are summarized below.

1. Produce a saleable arsenic trioxide product
2. Recover gold values contained in high temperature filter residues.
3. Empty underground arsenic storage chambers, making surrounding gold bearing ore available for mining.
4. Recover antimony oxide values from high temperature gas filter residues.
5. Eliminate storage requirements for currently produced As₂O₃ bearing baghouse dust.
6. Eliminate long-term storage concerns related to permanent mine closure.

Scope of Work

The work involves design and fabrication of a high temperature sintered metal pilot scale filter followed by a two week pilot plant campaign at Research and Productivity Council's New Brunswick research facility. Fabrication of the test filter will be done by Pall Corporation, who are represented by Pall Canada of Toronto. Testing will be done using crude baghouse dust shipped from Giant.

Giant representatives will visit the pilot plant during the testing to ensure that all data necessary for full scale filter design is being collected. RPC will prepare a final report of the test program that is expected to enable Giant to detail filter specifications required in the purification plant.

PY (Person Year) Requirements

The work involved in conducting the test can be separated into 3 distinct areas, design and preparation, fabrication and installation, and testing and reporting. Manpower required at each stage is as follows:

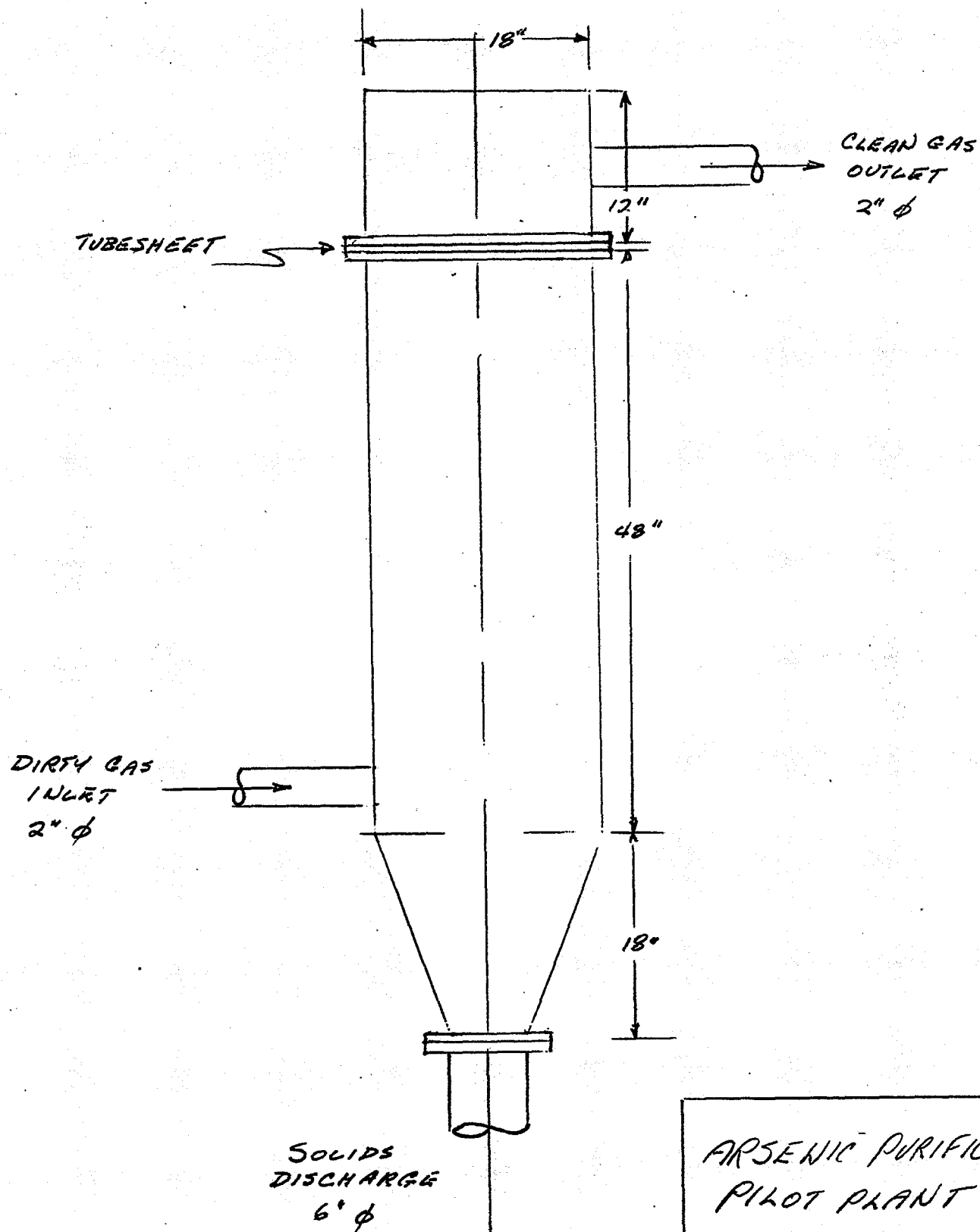
Design and Preparation	100 hours at \$40.00/hr
Fabrication and Installation	250 hours at \$50.00/hr
Testing and Reporting	1153 hours at \$44.55/hr
Total	1503 hours at \$45.15/hr.

Budget

Total project cost is estimated at \$100,000, with \$67,860 allocated to labour, engineering and supervision, the rest allocated to safety and miscellaneous supplies, chemical analyses, travel, equipment, etc.

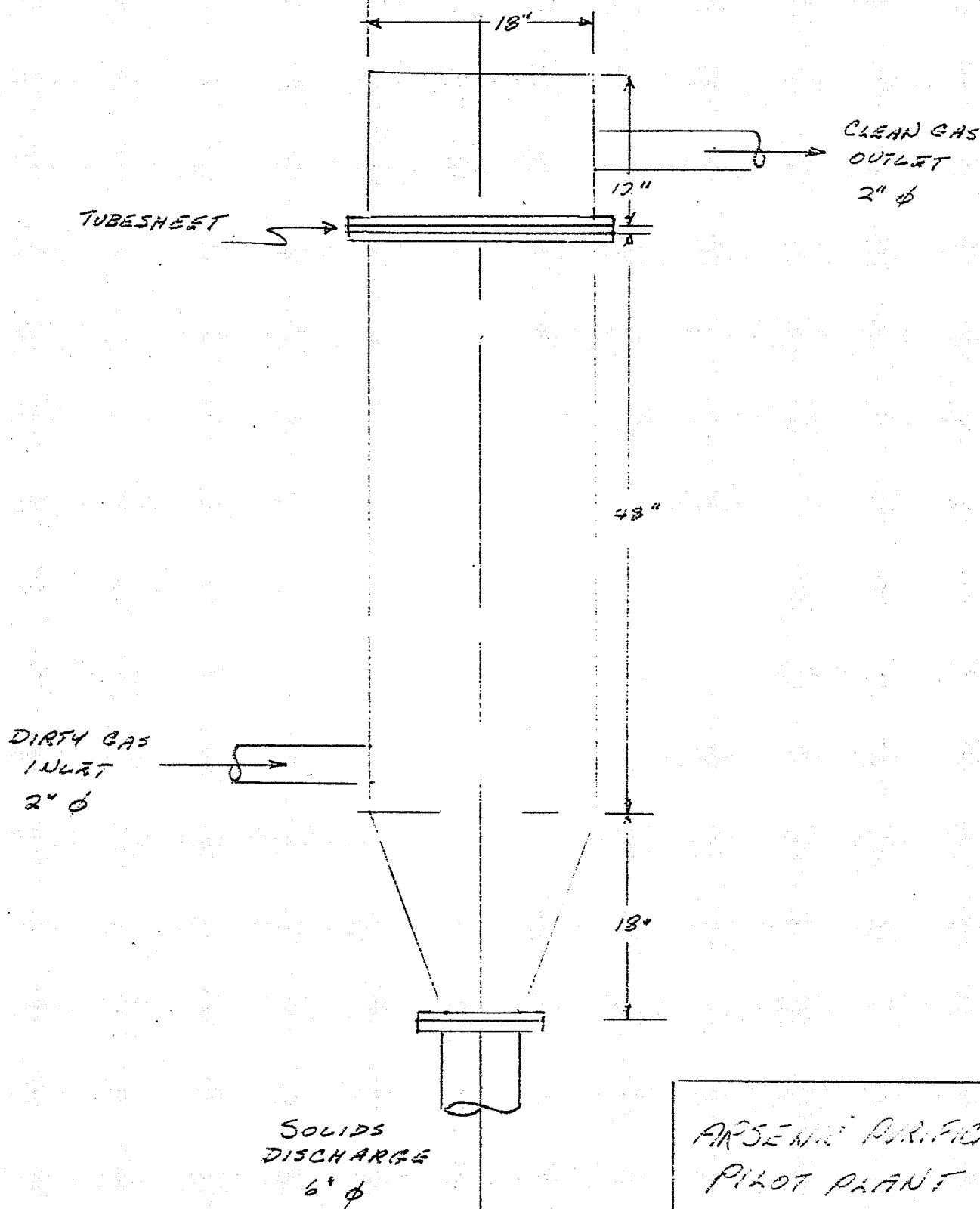
Timetable

Following approval of the project, design, fabrication and installation can be completed in about 4 weeks. Pilot testing will occupy another 2 weeks and the final report is expected to be distributed within 3 weeks of completion of the test. Starting date is not critical but it must be scheduled so that the work can be accommodated by RPC without major disruption of their existing schedule. Current planning anticipates starting the project by May 1, 1989.



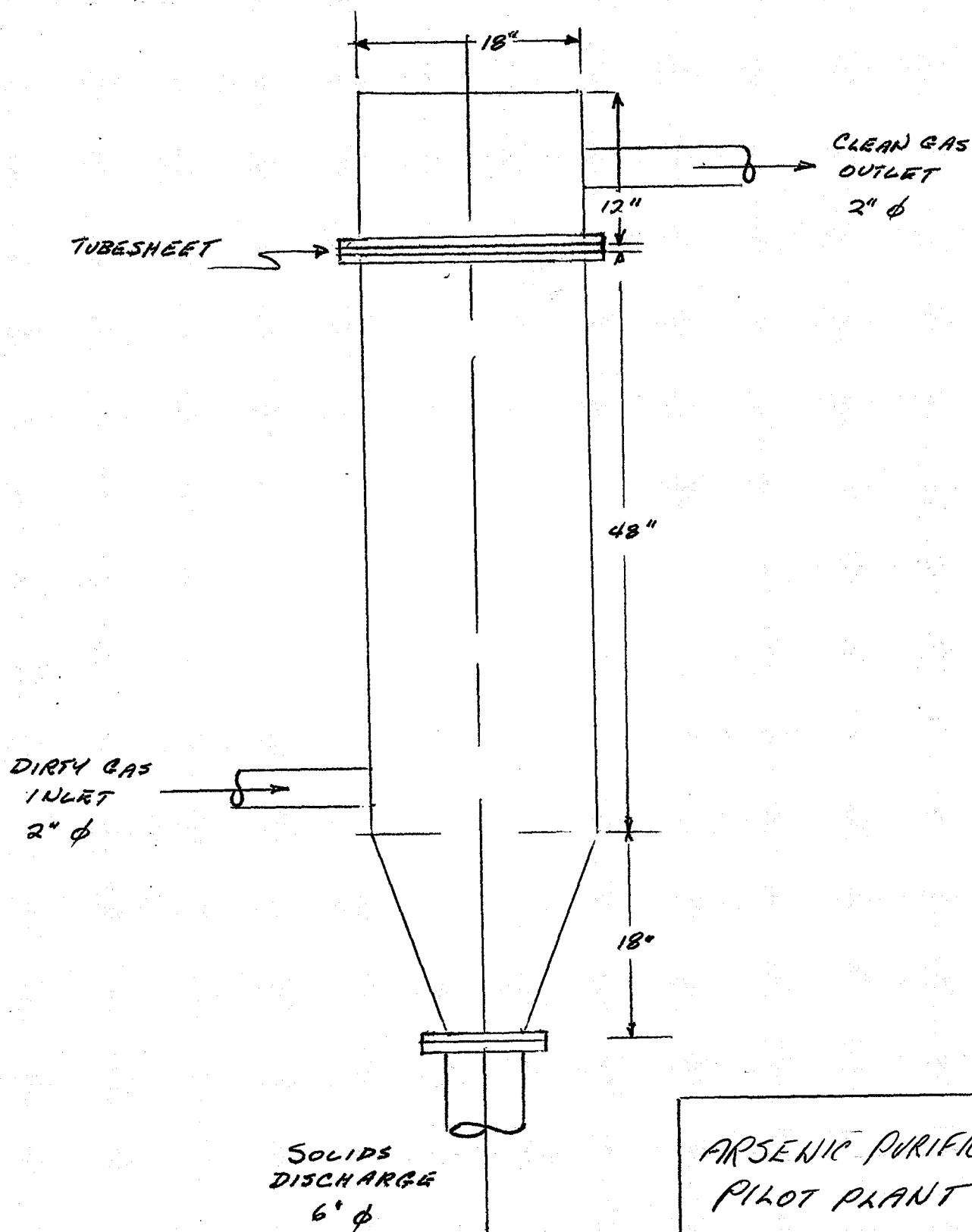
ARSENIC PURIFICATION
PILOT PLANT

HOT FILTER
ENCLOSURE.

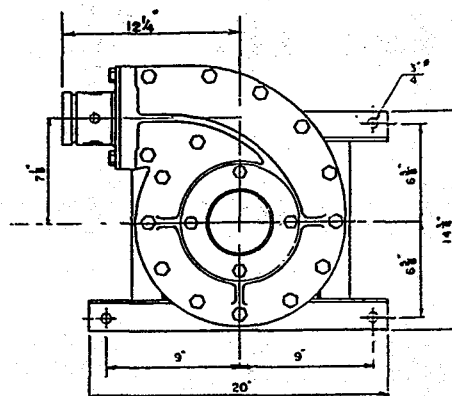


ARSENIC PURIFICATION
PILOT PLANT

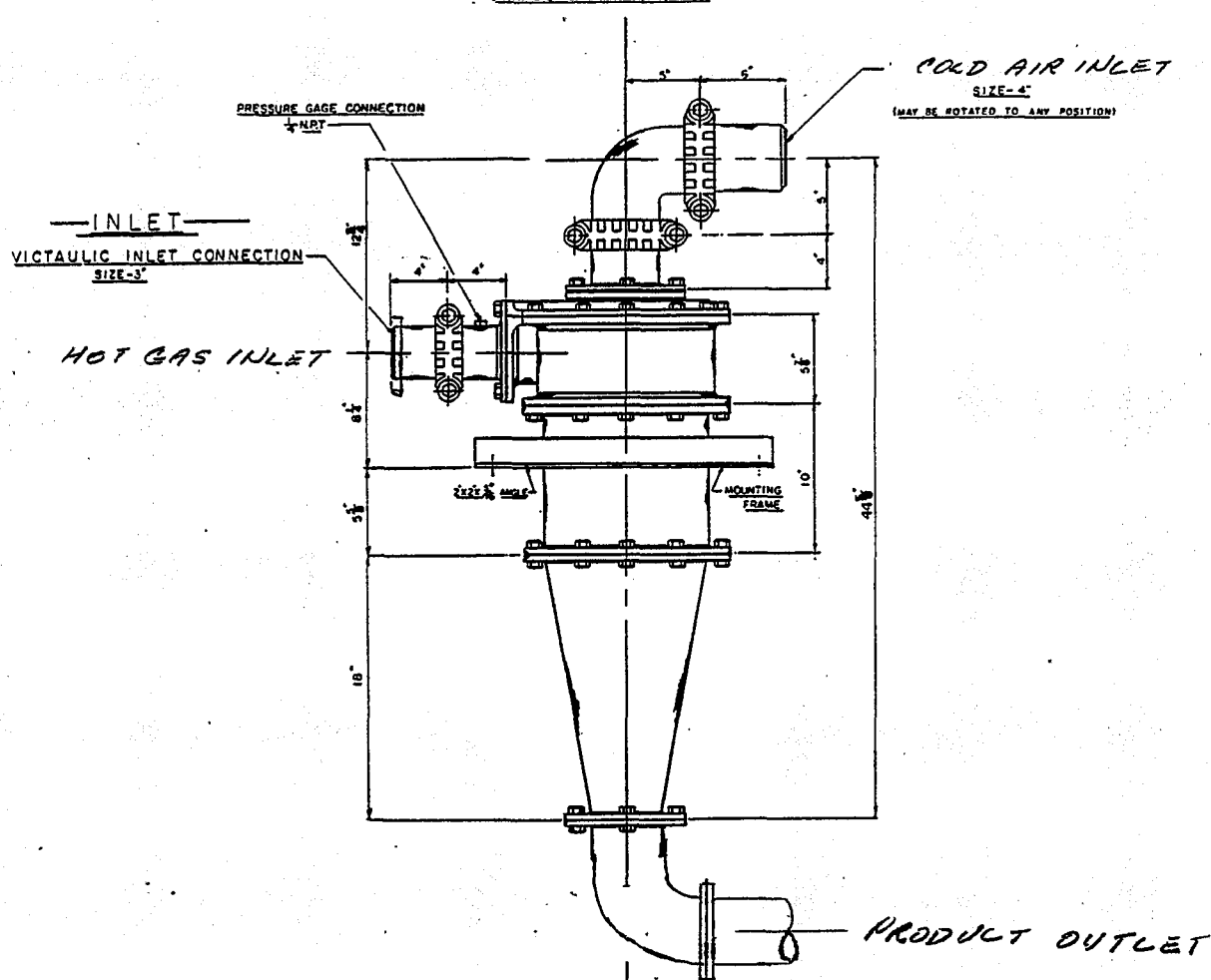
HOT FILTER
ENCLOSURE



ARSENIC PURIFICATION
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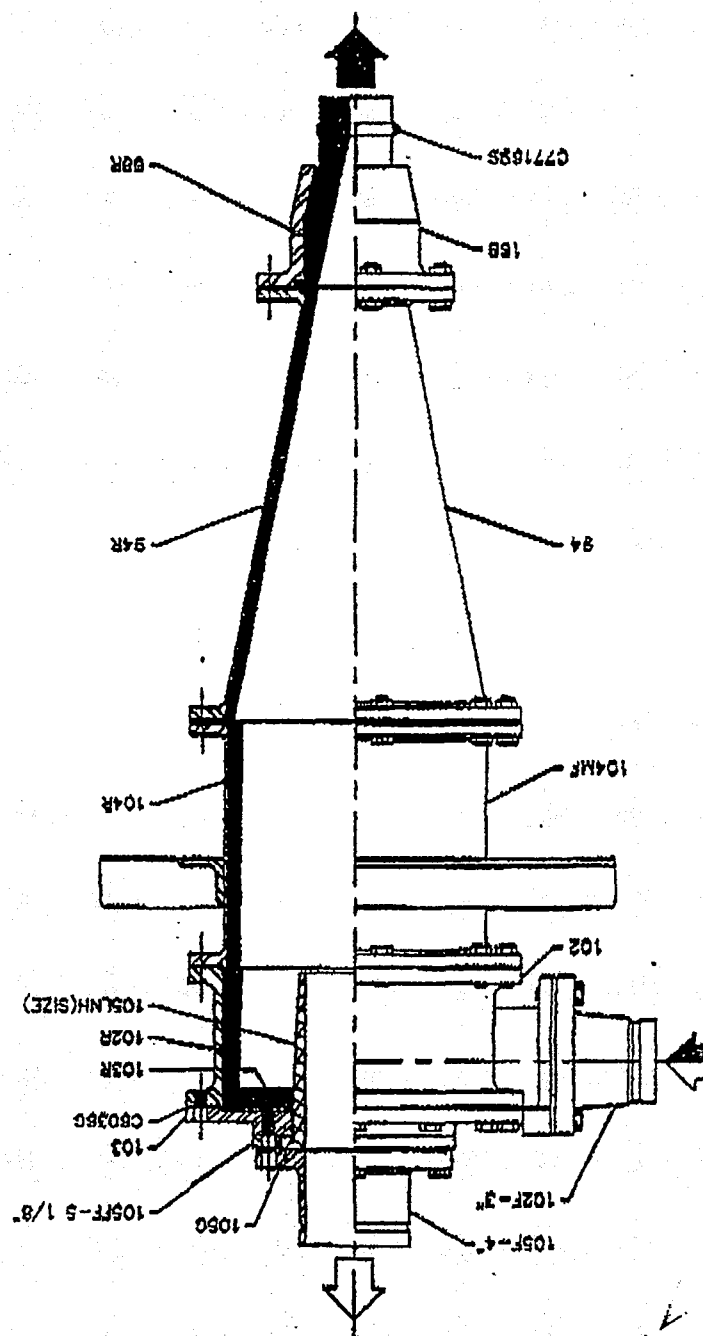
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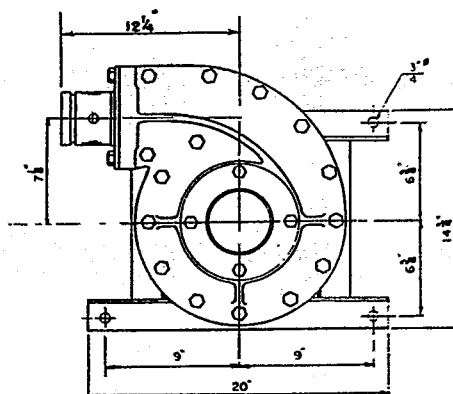


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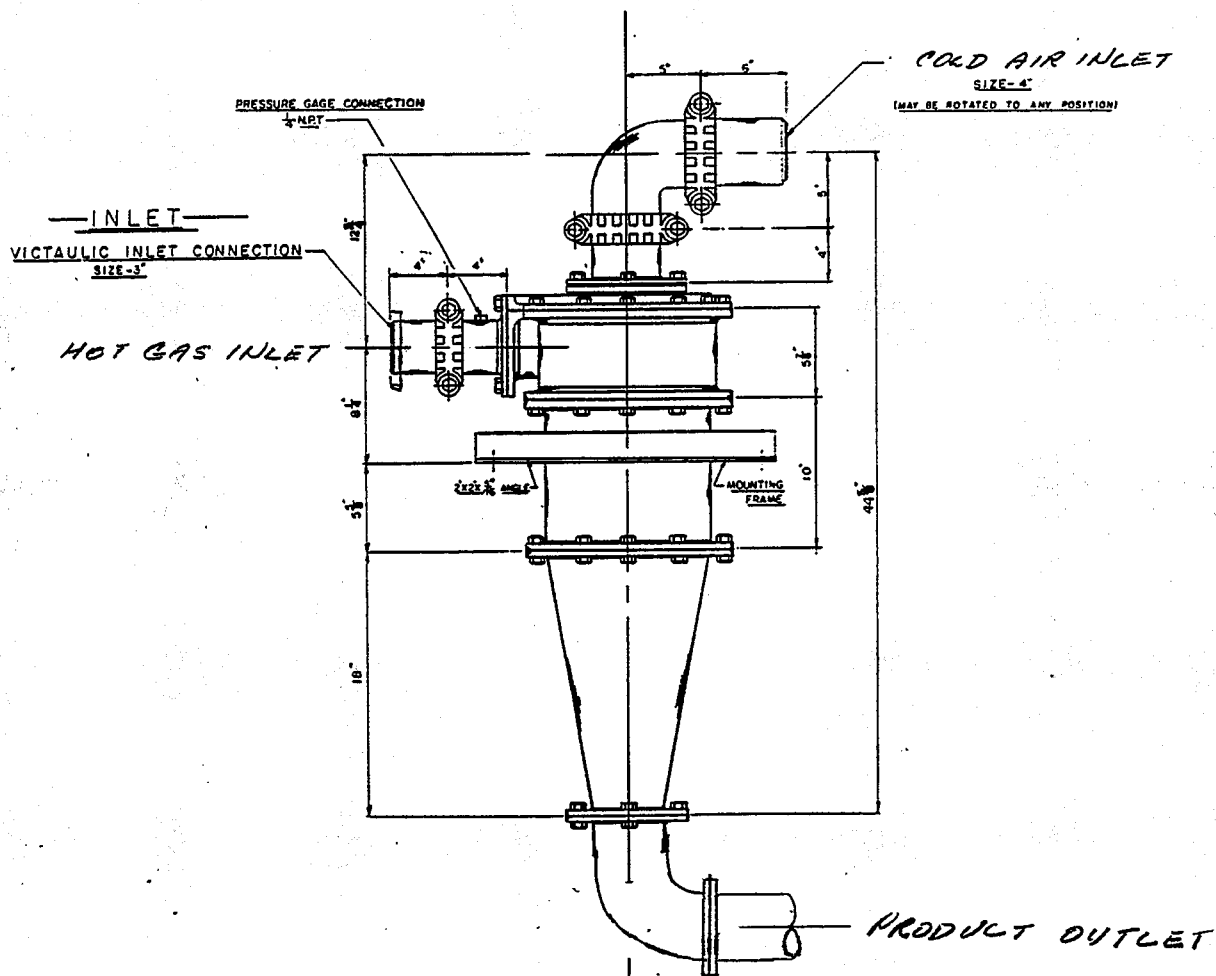
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ARSENIC PURIFICATION
PILOT PLANT.
CYCLONE
CONDENSER





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