

R. R. Galiaferro

STATEMENT OF ESTIMATED COST TO COMPLETE
Contract NAW-1460 (including extras)

As of September 11, 1943 - and concurred in by

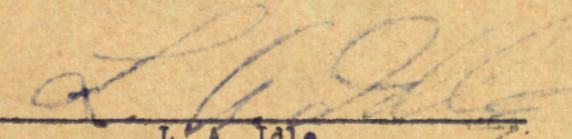
Messrs. B. G. Gulick, Colonel John Stewart, C. H. Dawson, A. W. Young, L. R. Marcus, K. D. Brumbaugh, and A. E. Bittner of the NACA. Messrs. L. A. Idle and R. G. Tait of P-DMS Company in the office of Mr. B. G. Gulick, ground floor of the Administration Building, September 24, 1943.

SUMMARY

Obligations incurred to September 11, 1943 - per financial report of P-DMS Co. as at that date (exclusive of one week's advance payroll included)	\$4,434,354.00
Estimated Additional Costs To Be Incurred:	
Office payrolls and expense	35,000.00
Field payrolls, as per list attached:	464,641.00
Compensation, social security and unemployment taxes - estimated average 10%	46,464.00
Engineering specialists	20,000.00
Ice Tunnel refrigerant piping insulation	10,000.00
Additional Altitude Tunnel insulation	10,000.00
Small bills - estimated	5,000.00
Extras on steel - estimated	25,000.00
Rental rolls - estimated	<u>12,000.00</u>
 TOTAL - (Exclusive of Contingencies)	 <u>\$5,062,459.00</u>

Submitted for

PITTSBURGH-DES MOINES STEEL COMPANY

By 
L. A. Idle
Project Superintendent

Date: September 24, 1943

STATEMENT OF ESTIMATED COST TO COMPLETE
Contract NAW-1460 (including extras)

September 11, 1943

SUMMARY OF FIELD PAYROLLS

Tunnel Shell, rings, Test Chamber & Miscellaneous	\$ 40,100.00	
Insulation, shell and rings	45,430.00	
Vanes, Protection Screens and Fairing	10,530.00	
Exhauster Building	37,912.00	
Refrigeration System and Make-Up Air	115,024.00	
Electric Work	<u>75,000.00</u>	
 Total Altitude Tunnel		 \$ 323,996.00
 <u>ICE TUNNEL:</u>		
Erect, weld, and paint including vanes	\$ 47,470.00	
Heat Exchanger	15,000.00	
Coil Supports	1,500.00	
Install pipe and piping	22,500.00	
Floors in Test Chamber	2,500.00	
Install Motor Fairing	3,000.00	
Install Motor	<u>2,000.00</u>	
 Total Ice Tunnel		 \$ 93,970.00
 Extra work from Emerson	 \$ 28,010.00	
Extra Electrical Work from Martien	<u>18,665.00</u>	
		<u>\$ 46,675.00</u>
 TOTAL - (Exclusive of Contingencies)		 <u>\$ 464,641.00</u>

ESTIMATED COST TO COMPLETE ALTITUDE TUNNEL AND ICE TUNNEL
 Contract No. NAW-1460 Job No. 260-42

September 11, 1943

ALTITUDE TUNNEL

Altitude Tunnel Shell and Rings:

Boilermakers	\$ 27,000.00
Painter - Cleaning Up	5,400.00
Hoisting Engineers	1,600.00
Carpenters	4,300.00
Millwrights	<u>1,800.00</u>

\$ 40,100.00

Insulation:

Shell

Asbestos Workers	\$ 12,100.00
Hoist Engineer	405.00
Carpenters	405.00
Boilermakers (Welders)	4,100.00
Painting	16,000.00
Inside - 2 Paint 1 Clean - 4 Coats	
Outside - 2 " 1 " - 4 Coats	
Have painted 8 Coats at Cost of \$31,000 =	
\$4,000 per Coat.	
Apply 3 Paint and 1 Clean - Equivalent 5	
Coats, but easier Scaffolding say 4 Coats	
@ 4¢ = Cost of 16¢ sq. ft.	

Rings

Asbestos Workers	\$ 6,480.00
Hoist Engineer	270.00
Carpenter	270.00
Welders	<u>5,400.00</u>

\$ 45,430.00

Vanes, Protection Screens, and Fairing:

Sheet Metal Workers	\$ 5,400.00
Welders	4,050.00
Carpenters	<u>1,080.00</u>

\$ 10,530.00

ALTITUDE TUNNELExhauster Building:

Set and run machines	\$ 10,769.00
Carpenters Forms, grout, and cleaning	1,074.00
Pipe fitting inside of building	3,000.00
Riggers - (With machines)	3,069.00
Exhaust line to Engine Research Building	2,000.00
Excavation - lay pipe - weld - concrete & backfill	<u>18,000.00</u>

\$ 37,912.00

Refrigeration Building:Inside Tunnel

Heat Exchanger - Headers - Outlet Vanes:

Steamfitters	\$ 5,400.00
Sheetmetal	1,800.00
Welders	900.00
Laborers	792.00
Hoist Engineers	<u>720.00</u>

\$ 9,612.00

Fairing:

Sheetmetal	\$ 2,700.00
Welders	900.00
Laborers	900.00
Hoist Engineers	<u>450.00</u>

\$ 4,950.00

York - Make-Up Air:

Steamfitters	\$ 5,400.00
(Baffles) Sheetmetal	900.00
Welder	1,350.00
Testing - Men	<u>1,350.00</u>

\$ 9,000.00

Carrier Inside Building:

Steamfitters	\$ 13,500.00
Welders	3,375.00
Laborers	2,970.00
Millwrights	<u>1,500.00</u>

\$ 21,345.00

ALTITUDE TUNNELRefrigeration:

Carriers additional Coils, etc:

Steamfitters	\$ 3,375.00	
Welders	1,012.00	
Laborers	<u>990.00</u>	
		\$ 5,377.00

Sandblasting:

Steamfitters		3,600.00
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Outside Piping:

Steamfitters	\$ 6,750.00	
Boilermakers	1,350.00	
Welders	2,700.00	
Carpenters	1,080.00	
Laborers	1,980.00	
Hoist Engineers	<u>540.00</u>	
		\$ 14,400.00

Miscel. Duct Work:

Sheetmetal		\$ 1,012.00
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Breather pipe under Tunnel:

Sheetmetal	\$ 1,350.00	
Welders	675.00	
Hoist Engineers	270.00	
Carpenters	<u>570.00</u>	
		\$ 2,865.00

ALTITUDE TUNNELRefrigeration:

Heating in Test Section:

Steamfitters \$ 2,000.00

Pneumatic Air Piping:

Steamfitters 4,050.00

Make-Up Air Line:

Boilermakers	\$ 4,050.00
Welders	2,025.00
Millwrights	<u>1,688.00</u>

7,763.00

Breeching - Louvres:

Men 900.00

Install Relief Door Air Line:

Men 1,350.00

Install Valves, Controls, etc., in
Make-Up Air Line:

Men 1,800.00

Test entire system and correct all leaks and
defects, Estimated figure25,000.00

TOTAL

\$115,024.00ICE TUNNEL

Erect and Weld - including Vanes \$ 41,470.00

Clean and Paint 6,000.00

Heat Exchanger 15,000.00

Coil Support 1,500.00

Pipe and Piping 22,500.00

Floors in Test Chamber 2,500.00

Install Motor Fairing 3,000.00

Install Drive Motor 2,000.00

TOTAL

\$ 93,970.00