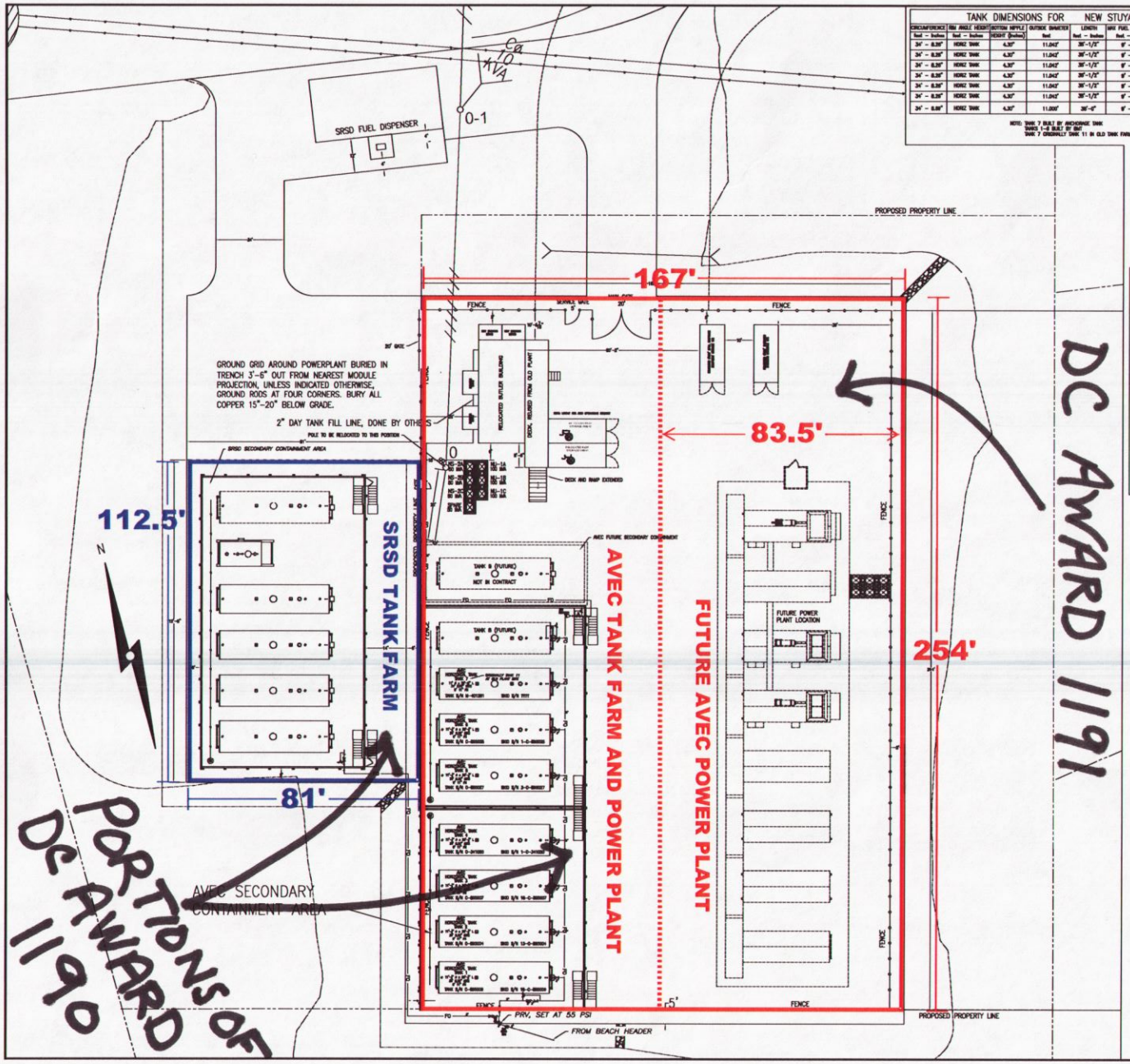


TANK DIMENSIONS FOR NEW STUYAHOK								TANK No.	FIELD INVENTORY		FOR OFFICE USE ONLY				FUEL (gallons)		
CIRCUMFERENCE feet – inches	Rim ANGLE HEIGHT feet – inches	BOTTOM NIPPLE HEIGHT (inches)	OUTSIDE DIAMETER feet	LENGTH feet – inches	MAX FUEL FILL HEIGHT feet – inches				WATER inches	LIQUID IN TANK feet – inches	GALLONS PER FOOT MULTIPLIER	CALCULATION	GALLONS PER INCH MULTIPLIER	CALCULATION	QUANTITY INVENTORIED	MAXIMUM FILL CAPACITY	USABLE CAPACITY
34' – 0.25"	HORIZ TANK	4.30"	11.042'	36'-1/2"	9' – 11"			1			HORIZONTAL	TANK	SEE	FORMULA		35,630	35,371
34' – 0.25"	HORIZ TANK	4.30"	11.042'	36'-1/2"	9' – 11"			2			HORIZONTAL	TANK	SEE	FORMULA		35,630	35,371
34' – 0.25"	HORIZ TANK	4.30"	11.042'	36'-1/2"	9' – 11"			3			HORIZONTAL	TANK	SEE	FORMULA		35,630	35,371
34' – 0.25"	HORIZ TANK	4.30"	11.042'	36'-1/2"	9' – 11"			4			HORIZONTAL	TANK	SEE	FORMULA		35,630	35,371
34' – 0.25"	HORIZ TANK	4.30"	11.042'	36'-1/2"	9' – 11"			5			HORIZONTAL	TANK	SEE	FORMULA		35,630	35,371
34' – 0.25"	HORIZ TANK	4.30"	11.042'	36'-1/2"	9' – 11"			6			HORIZONTAL	TANK	SEE	FORMULA		35,630	35,371
34' – 0.00"	HORIZ TANK	4.30"	11.000'	36'-0"	9' – 11"			7			HORIZONTAL	TANK	SEE	FORMULA		35,485	35,210
														TANK FARM TOTALS		176,313	177,443

NOTE: TANK 7 BUILT BY ANCHORAGE TANK
TANKS 1-6 BUILT BY EMC
TANK 7 ORIGINALLY TANK 11 IN OLD TANK FARM

DAYTANK READING

DATE	AMOUNT OF FUEL IN TANK	REGISTER TOTAL	FUEL INVENTORY AND DAYTANK READING TAKEN BY: SIGNATURE
DAYTANK DIMENSIONS			NUMBER OF BARRELS OF LUBE OIL ON SITE
LENGTH		OUTSIDE DIAMETER	
			GALLONS OF ANTIFREEZE ON SITE

FOR HORIZONTAL TANKS 1-6

MAXIMUM FUEL FILL HEIGHT (F.H.) = INSIDE DIAMETER OF TANK – SIZE OF TANK CAPACITY (FOR FUEL EXPANSION)
MAXIMUM FUEL FILL CAPACITY: USE MAXIMUM FUEL FILL HEIGHT TO DETERMINE "K". USE "K" TO FIND "P"

USABLE FUEL CAPACITY: MAXIMUM FUEL FILL CAPACITY – UNUSABLE FUEL CAPACITY
UNUSABLE FUEL CAPACITY: USE BOTTOM NIPPLE HEIGHT TO DETERMINE "K". USE "K" TO FIND "P"

FOR HORIZONTAL TANKS 1-6 11'-1/2" D X 36'-1/2" L

$$\frac{\text{FUEL IN INCHES}}{132} = \text{K (USE "K" TO FIND "P")}$$

TANKS 1-6 TOTAL FUEL IN GALLONS = P x 17,424 x 456 x 0.0034

FOR HORIZONTAL TANK 7

MAXIMUM FUEL FILL HEIGHT (F.H.) = INSIDE DIAMETER OF TANK – SIZE OF TANK CAPACITY (FOR FUEL EXPANSION)
MAXIMUM FUEL FILL CAPACITY: USE MAXIMUM FUEL FILL HEIGHT TO DETERMINE "K". USE "K" TO FIND "P"

USABLE FUEL CAPACITY: MAXIMUM FUEL FILL CAPACITY – UNUSABLE FUEL CAPACITY
UNUSABLE FUEL CAPACITY: USE BOTTOM NIPPLE HEIGHT TO DETERMINE "K". USE "K" TO FIND "P"

FOR HORIZONTAL TANK 7 11'-0" D X 36'-0" L

$$\frac{\text{FUEL IN INCHES}}{131.5} = \text{K (USE "K" TO FIND "P")}$$

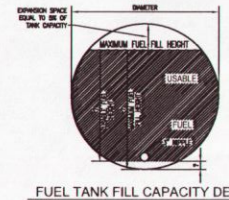
TANK 7 TOTAL FUEL IN GALLONS = P x 17,282 x 455.5 x 0.0034

NOTE: WALL THICKNESS IS 0.25" FOR HORIZONTAL TANKS

FACTOR TABLE

K	P	K	P	K	P	K	P
.01	.0017	.26	.2066	.51	.5128	.76	.8155
.02	.0048	.27	.2178	.52	.5256	.77	.8263
.03	.0087	.28	.2291	.53	.5383	.78	.8370
.04	.0134	.29	.2405	.54	.5510	.79	.8474
.05	.0187	.30	.2523	.55	.5636	.80	.8577
.06	.0244	.31	.2640	.56	.5763	.81	.8677
.07	.0308	.32	.2757	.57	.5889	.82	.8776
.08	.0375	.33	.2876	.58	.6012	.83	.8874
.09	.0446	.34	.2997	.59	.6140	.84	.8968
.10	.0520	.35	.3118	.60	.6265	.85	.9060
.11	.0598	.36	.3241	.61	.6390	.86	.9150
.12	.0680	.37	.3363	.62	.6514	.87	.9236
.13	.0764	.38	.3486	.63	.6637	.88	.9320
.14	.0850	.39	.3610	.64	.6759	.89	.9402
.15	.0940	.40	.3735	.65	.6882	.90	.9480
.16	.1032	.41	.3860	.66	.7003	.91	.9556
.17	.1126	.42	.3988	.67	.7124	.92	.9625
.18	.1224	.43	.4111	.68	.7243	.93	.9692
.19	.1328	.44	.4237	.69	.7360	.94	.9761
.20	.1423	.45	.4364	.70	.7477	.95	.9813
.21	.1528	.46	.4490	.71	.7595	.96	.9866
.22	.1638	.47	.4617	.72	.7709	.97	.9913
.23	.1737	.48	.4744	.73	.7822	.98	.9952
.24	.1845	.49	.4872	.74	.7934	.99	.9983
.25	.1954	.50	.5000	.75	.8046	1.00	1.000

TYPICAL HORIZONTAL FUEL STORAGE TANK



FUEL TANK FILL CAPACITY DETAIL
NO SCALE

NO.	DATE	BY	REVISIONS
7	5/20/10	SA	MODIFIED PIPING LAYOUT PER HDL
6	5/20/10	SA	ADDITIONAL TANK LENGTH CORRECTION
5	5/20/10	SA	CORRECTION TO INVENTORY TABLE TANK DIMS
4	5/20/10	SA	UPDATED TANK DIMS, FILL HEIGHTS, CAPACITIES
3	3/1/10	SA	UPDATE INFO PER MATT METCALF
2	9/9/09	SA	MODIFIED TANK INFO PER MARK B AND CARL H.
1	6/20/09	SA	MODIFIED TANK FINAL ST WAS PER MARK B AND DAN K.

ALASKA VILLAGE ELECTRIC COOPERATIVE
4831 Eagle Street
Anchorage, Alaska 99503

TITLE
NEW STUYAHOK PLANT SITE

WORK ORDER No. 9726422
BY EDRUIZ FF #
ENGR. M. TETZEL CAD# P640P000
VILLAGE NEW STUYAHOK
SCALE 3/32"=1'-0" DATE 06-23-11 SHEET 1 OF 1
NO. 1-64-0000 REV. 7