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Lampiran 1 Data Meteorologi

Tahun	Bulan	Hari	Jam	Temperature (c)	Pressure (mbar)	Velocity (m/s)	Ceiling Height (m)	Precipitation (mm)	Radiaton (Wh/m ²)	Wind Direction (Deg)	Relative Humadity (%)	Cloud Cover (Oktas)
2020	10	4	0	23,834	1012,988	5,880	276,844	0,05	396,75	172,83	81,69	7
2020	10	4	1	23,688	1012,622	6,030	234,671	0,06	406,40	173,98	81,25	7
2020	10	4	2	23,677	1012,164	6,140	238,776	0,06	400,43	174,38	80,56	7
2020	10	4	3	23,682	1011,761	6,240	271,041	0,04	397,51	174,83	80,12	6
2020	10	4	4	23,747	1012,428	6,270	288,324	0,02	404,43	175,57	80,31	7
2020	10	4	5	23,861	1012,326	6,200	306,131	0,01	399,60	175,88	80,44	5
2020	10	4	6	23,924	1013,086	5,970	339,983	0,02	410,78	174,29	80,56	6
2020	10	4	7	23,917	1013,516	5,650	316,330	0,00	388,72	171,33	80,94	7
2020	10	4	8	23,944	1014,340	5,280	306,783	0,00	394,29	167,01	82	7
2020	10	4	9	23,961	1014,576	4,760	328,063	0,00	388,72	161,45	83,94	7
2020	10	4	10	24,057	1014,601	3,990	345,483	0,00	390,99	155,99	87	7
2020	10	4	11	24,121	1014,262	3,680	366,702	0,00	388,43	151,21	88,12	6
2020	10	4	12	24,165	1013,658	3,450	367,361	0,00	391,02	148,61	88,62	7
2020	10	4	13	24,211	1013,263	3,450	401,401	0,00	393,62	148,61	88,62	7
2020	10	4	14	24,211	1012,179	3,150	485,851	0,00	389,68	148,28	89,12	7
2020	10	4	15	24,221	1011,619	2,810	442,099	0,00	385,68	152,86	89,88	7
2020	10	4	16	24,239	1011,331	2,740	443,919	0,00	384,62	157,90	90,62	7
2020	10	4	17	24,225	1011,492	2,810	430,477	0,00	382,30	161,36	91,12	7
2020	10	4	18	24,192	1011,568	2,920	423,981	0,00	386,24	164,81	91,44	6
2020	10	4	19	24,140	1012,176	3,080	378,481	0,00	382,21	167,86	91,62	5
2020	10	4	20	24,130	1012,847	3,320	372,835	0,00	393,81	169,70	91,62	7
2020	10	4	21	24,083	1013,585	3,510	372,839	0,00	393,44	171,42	91,44	7
2020	10	4	22	24,052	1013,854	3,540	373,042	0,00	384,38	173,92	91,31	7
		4	23	23,996	1014,071	3,620	367,231	0,00	391,69	178,64	90,88	6



Tahun	Bulan	Hari	Jam	Temperature (c)	Pressure (mbar)	Velocity (m/s)	Ceiling Height (m)	Precipitation (mm)	Radiaton (Wh/m ²)	Wind Direction (Deg)	Relative Humadity (%)	Cloud Cover (Oktas)
2021	4	14	0	27,929	1011,711	1,890	493,989	0,09	429,93	167,81	76,38	6
2021	4	14	1	27,708	1011,242	2,690	441,010	0,13	421,51	176,16	75,88	6
2021	4	14	2	27,397	1010,553	3,380	425,031	0,14	427,37	178,67	76,44	6
2021	4	14	3	27,042	1010,139	3,730	364,854	0,15	424,28	179,05	77,81	6
2021	4	14	4	26,875	1009,921	3,790	319,914	0,18	422,97	179,65	79,56	5
2021	4	14	5	27,045	1009,702	3,740	340,468	0,06	419,27	181,32	80,94	6
2021	4	14	6	27,237	1010,621	3,730	384,015	0,04	419,65	183,85	81,69	6
2021	4	14	7	27,516	1010,965	3,790	305,384	1,00	419,05	187,34	82,88	6
2021	4	14	8	27,814	1011,799	3,590	283,649	1,46	417,57	190,77	84,19	6
2021	4	14	9	28,052	1012,349	3,060	328,625	1,08	424,92	191,80	85,25	6
2021	4	14	10	26,680	1013,545	2,200	362,924	1,01	421,55	192,71	87,06	6
2021	4	14	11	26,129	1013,119	1,650	381,349	1,65	427,76	190,94	86,81	6
2021	4	14	12	25,961	1012,600	1,230	555,397	0,87	439,49	179,27	86,06	6
2021	4	14	13	26,429	1011,837	0,890	396,289	0,02	426,16	156,14	85,06	5
2021	4	14	14	26,742	1010,917	0,890	372,504	0,00	421,38	120,80	84,5	6
2021	4	14	15	27,016	1010,089	1,100	459,655	0,02	424,25	111,65	84,75	5
2021	4	14	16	27,274	1009,436	1,350	495,453	0,04	434,95	120,28	85,62	3
2021	4	14	17	27,427	1009,489	1,580	586,273	0,03	438,36	130,39	86,38	4
2021	4	14	18	27,564	1009,573	1,750	493,028	0,02	434,53	142,82	86,69	6
2021	4	14	19	27,732	1010,088	1,960	747,000	0,01	442,35	151,50	86,81	6
2021	4	14	20	27,870	1010,238	2,240	588,812	0,00	438,71	158,90	87,06	5
2021	4	14	21	27,947	1011,105	2,680	494,407	0,01	425,09	167,91	87,88	5
		14	22	27,878	1011,434	3,090	494,810	0,02	432,92	172,16	88,12	5
		14	23	27,739	1011,174	3,610	494,894	0,18	439,58	172,92	86,75	6



Tahun	Bulan	Hari	Jam	Temperature (c)	Pressure (mbar)	Velocity (m/s)	Ceiling Height (m)	Precipitation (mm)	Radiaton (Wh/m ²)	Wind Direction (Deg)	Relative Humadity (%)	Cloud Cover (Oktas)
2021	11	30	0	26,226	1014,336	0,070	556,213	0,04	414,89	110,56	71	6
2021	11	30	1	26,111	1013,661	0,140	683,018	0,05	409,89	263,66	67,5	6
2021	11	30	2	26,058	1013,404	0,450	761,496	0,05	421,71	228,53	64,38	7
2021	11	30	3	26,014	1012,587	0,810	556,487	0,04	411,68	227,35	62,12	6
2021	11	30	4	25,972	1012,749	0,840	756,915	0,01	414,22	223,49	60,75	6
2021	11	30	5	25,976	1012,981	0,630	484,024	0,01	419,43	212,91	60,38	5
2021	11	30	6	25,990	1013,716	0,380	490,094	0,02	417,76	172,87	60,69	5
2021	11	30	7	26,046	1014,370	0,600	539,478	0,00	420,37	95,19	61,94	6
2021	11	30	8	26,163	1014,723	1,200	555,844	0,00	423,75	60,44	64,56	5
2021	11	30	9	26,278	1015,236	1,760	567,336	0,00	430,12	62,30	67,88	4
2021	11	30	10	26,315	1015,781	2,080	664,536	0,00	420,87	50,80	73,94	5
2021	11	30	11	26,421	1014,748	2,500	627,948	0,00	420,89	27,13	76,94	5
2021	11	30	12	26,524	1013,928	2,840	627,704	0,00	418,63	9,67	78,44	6
2021	11	30	13	26,640	1012,990	2,660	673,767	0,00	418,63	358,48	79,25	6
2021	11	30	14	26,715	1012,226	2,310	703,214	0,00	412,50	324,92	79,44	6
2021	11	30	15	26,761	1011,622	2,150	753,693	0,00	421,04	324,92	79,75	6
2021	11	30	16	26,814	1011,388	2,280	677,999	0,00	418,22	303,96	79,75	5
2021	11	30	17	26,859	1011,106	2,410	705,823	0,00	415,82	291,66	80,31	5
2021	11	30	18	26,884	1011,357	2,470	764,867	0,01	419,48	288,66	80,88	5
2021	11	30	19	26,902	1011,832	2,390	737,954	0,01	426,86	290,45	81	5
2021	11	30	20	26,907	1012,861	2,200	804,372	0,01	425,12	296,38	80,69	5
2021	11	30	21	26,879	1013,432	1,960	810,327	0,00	422,59	308,05	79,75	7
		30	22	26,723	1013,686	1,660	562,726	0,01	421,51	320,92	78,69	7
		30	23	26,636	1013,696	1,340	604,486	0,02	424,88	226,58	73,38	6



Tahun	Bulan	Hari	Jam	Temperature (c)	Pressure (mbar)	Velocity (m/s)	Ceiling Height (m)	Precipitation (mm)	Radiaton (Wh/m ²)	Wind Direction (Deg)	Relative Humadity (%)	Cloud Cover (Oktas)
2022	5	15	0	26,844	1012,609	1,910	602,021	0,02	421,67	66,68	76,81	7
2022	5	15	1	26,780	1011,993	1,440	563,876	0,01	417,84	88,75	75,5	7
2022	5	15	2	26,715	1011,382	1,320	652,690	0,00	410,39	130,20	74,62	7
2022	5	15	3	26,706	1011,233	1,700	646,392	0,00	411,34	161,81	74,25	7
2022	5	15	4	26,673	1011,076	2,040	672,864	0,00	405,15	172,06	74,56	7
2022	5	15	5	26,700	1011,337	2,240	608,301	0,00	423,20	173,00	74,94	7
2022	5	15	6	26,747	1011,629	2,340	551,111	0,00	409,70	170,19	75,5	7
2022	5	15	7	26,814	1012,268	2,400	583,743	0,00	408,75	165,10	76,19	5
2022	5	15	8	26,914	1012,797	2,390	603,284	0,00	409,54	157,12	77,25	7
2022	5	15	9	27,072	1013,401	2,430	661,426	0,00	410,48	150,71	79,25	7
2022	5	15	10	27,305	1013,937	2,190	682,283	0,00	418,16	145,46	82,38	5
2022	5	15	11	27,449	1013,431	2,130	697,918	0,00	427,59	139,76	82,88	7
2022	5	15	12	27,508	1012,588	2,040	706,541	0,00	414,97	134,84	82,81	6
2022	5	15	13	27,580	1012,172	1,850	710,058	0,00	421,27	131,57	82,5	5
2022	5	15	14	27,623	1011,316	1,650	739,959	0,00	416,90	133,85	82,12	7
2022	5	15	15	27,642	1010,837	1,620	738,063	0,00	414,05	138,53	82,31	7
2022	5	15	16	27,657	1010,912	1,710	735,933	0,00	410,29	145,59	83,12	6
2022	5	15	17	27,674	1010,896	1,850	736,041	0,00	413,11	152,03	84,06	7
2022	5	15	18	27,724	1011,334	2,000	737,502	0,00	421,82	156,24	84,88	7
2022	5	15	19	27,718	1011,956	2,130	755,159	0,00	418,16	158,24	85,44	6
2022	5	15	20	27,737	1012,605	2,160	729,967	0,00	420,29	157,89	85,44	7
2022	5	15	21	27,776	1013,180	2,080	742,802	0,01	410,24	157,20	85,06	7
		15	22	27,714	1013,585	1,900	788,167	0,01	420,60	156,18	84,88	7
		15	23	27,660	1013,338	2,120	775,886	0,01	414,44	157,49	80,81	7



Tahun	Bulan	Hari	Jam	Temperature (c)	Pressure (mbar)	Velocity (m/s)	Ceiling Height (m)	Precipitation (mm)	Radiaton (Wh/m ²)	Wind Direction (Deg)	Relative Humadity (%)	Cloud Cover (Oktas)
2022	10	19	0	25,215	1014,336	2,020	422,914	0,02	412,82	86,01	79,62	5
2022	10	19	1	25,090	1013,661	2,040	390,997	0,03	417,72	86,49	79,12	5
2022	10	19	2	25,038	1013,404	2,050	373,975	0,03	417,44	91,09	78,25	5
2022	10	19	3	24,985	1012,587	2,090	370,533	0,03	419,02	92,79	77,31	6
2022	10	19	4	24,978	1012,749	2,210	370,733	0,02	424,52	93,04	76	5
2022	10	19	5	24,911	1012,981	2,440	369,788	0,03	421,39	95,51	74,56	5
2022	10	19	6	24,953	1013,716	2,720	402,347	0,04	424,14	97,08	73,56	5
2022	10	19	7	24,969	1014,370	3,130	431,259	0,01	417,79	97,60	73,06	4
2022	10	19	8	24,949	1014,723	3,410	454,624	0,01	410,21	95,52	75,56	5
2022	10	19	9	24,985	1015,236	2,870	484,939	0,00	413,32	97,51	79,5	6
2022	10	19	10	24,999	1015,781	2,810	619,527	0,00	409,33	97,18	80	5
2022	10	19	11	25,014	1014,748	2,680	853,737	0,00	410,19	96,86	80,25	5
2022	10	19	12	25,033	1013,928	2,520	499,768	0,00	400,00	95,34	80,56	6
2022	10	19	13	25,038	1012,990	2,350	504,627	0,00	401,37	93,24	80,88	6
2022	10	19	14	25,034	1012,226	2,160	503,504	0,00	399,34	89,79	81,19	5
2022	10	19	15	25,025	1011,622	1,950	567,701	0,00	400,24	87,24	81,38	5
2022	10	19	16	24,991	1011,388	1,690	554,319	0,00	400,91	87,61	81,19	6
2022	10	19	17	24,963	1011,106	1,460	676,789	0,00	395,26	88,77	81	6
2022	10	19	18	24,971	1011,357	1,350	360,533	0,00	392,22	88,01	81,06	6
2022	10	19	19	24,970	1011,832	1,330	508,334	0,00	397,62	88,32	81,25	5
2022	10	19	20	24,982	1012,861	1,290	488,491	0,00	396,32	88,61	81,31	5
2022	10	19	21	25,001	1013,432	1,170	487,310	0,00	401,18	90,38	81,56	6
		19	22	25,036	1013,686	1,150	487,657	0,01	403,42	95,67	79,94	6
		19	23	25,006	1013,696	1,140	497,309	0,01	409,13	96,24	78,02	5



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2023	3	5	0	28,173	1010,873	2,310	552,990	0,04	420,94	309,66	74,62	6
2023	3	5	1	27,939	1010,377	2,270	557,908	0,15	429,54	312,63	72,81	5
2023	3	5	2	27,683	1009,690	2,120	501,007	0,20	424,39	318,28	71	6
2023	3	5	3	27,519	1009,177	2,050	459,290	0,12	420,49	323,35	69,56	7
2023	3	5	4	27,254	1009,404	1,960	417,926	0,10	423,64	328,33	68,5	6
2023	3	5	5	27,174	1009,848	1,870	402,327	0,08	429,51	338,38	67,69	6
2023	3	5	6	27,211	1010,476	1,910	419,999	0,04	426,31	350,81	67,12	6
2023	3	5	7	27,284	1010,874	2,030	551,498	0,02	422,91	2,42	66,62	4
2023	3	5	8	27,448	1011,659	2,150	714,657	0,00	423,81	10,45	67,62	6
2023	3	5	9	27,663	1011,988	2,120	605,115	0,00	421,82	12,15	73,56	6
2023	3	5	10	27,917	1012,581	2,350	495,574	0,01	421,51	6,49	76,06	7
2023	3	5	11	28,050	1011,964	2,630	495,826	0,03	423,44	356,59	76,69	6
2023	3	5	12	28,017	1011,193	2,790	490,322	0,06	420,86	345,22	77,31	6
2023	3	5	13	27,912	1010,357	2,870	466,882	0,07	426,48	333,85	77,88	6
2023	3	5	14	27,867	1009,288	2,920	450,059	0,08	424,73	323,04	78,5	5
2023	3	5	15	27,943	1008,840	2,930	453,047	0,05	419,29	310,78	79,56	7
2023	3	5	16	27,952	1008,834	2,900	473,507	0,07	425,31	296,91	80,81	6
2023	3	5	17	27,807	1009,051	2,820	472,282	0,18	423,38	282,65	81,94	6
2023	3	5	18	27,530	1009,417	2,720	426,653	0,26	422,03	268,85	82,88	7
2023	3	5	19	27,549	1009,999	2,570	582,186	0,04	423,67	256,64	83,44	4
2023	3	5	20	27,690	1010,222	2,400	558,971	0,04	424,63	245,19	83,62	5
2023	3	5	21	27,756	1010,518	2,050	558,947	0,02	422,83	232,43	82,69	6
		5	22	28,173	1010,795	1,510	559,085	0,03	418,87	224,16	81,94	6
		5	23	28,061	1011,287	0,890	536,785	0,04	419,93	228,20	78,94	6



Lampiran 2 Laporan Hasil Pengujian

PT. ANUGRAH ANALISIS SEMPURNA
One Line Laboratory Services
 Jl. Raya Jakarta Bogor Km 37, Cilodong, Depok Jawa Barat Indonesia 16412
 Telp. 021-29629393/4, Fax 021-29629395, <http://www.aaslaboratory.com>

KAN
 Standar Nasional Indonesia
 LP-565-IDN

LAPORAN HASIL PENGUJIAN
 No: AAS LHP XI 2022.3618

Nama Pelanggan: PT. Nusa Buana Cipta
 Customer Name: PT. Nusa Buana Cipta
 Parameter Analisa: Emisi Sumber Tidak Bergerak
 Parameter: Emisi Sumber Tidak Bergerak

Tanggal Sampling: 18 Oktober 2022
 Sampling Date: 18 Oktober 2022
 Waktu Sampling: 08.00 WITA
 Sampling Time: 08.00 WITA

No.	No. Sample	Kode sample	Parameter Uji	Hasil Terukur	Hasil Terkoreksi	Kadar Maksimum	Satuan	Metode Pengukuran	Keterangan
2	10.4219	AE-12 MTD-4 TOX CPP Matindok S: 01° 19' 45.8" E: 122° 29' 26.1"	Partikulat	29.72	57.13	400	mg/Nm ³	SNI 7117.17-2009 US-EPA Method 17	
			Sulfur Dioksida (SO ₂)	10.04	19.31	1500	mg/Nm ³	18-NON-74/MU/SMM-AAS (Flue Gas Analyzer)	
			Nitrogen Oksida (NO _x)	44.02	84.63	1000	mg/Nm ³	18-NON-74/MU/SMM-AAS (Flue Gas Analyzer)	
			Oksigen (O ₂)	10.08	-	-	%	18-NON-74/MU/SMM-AAS (Flue Gas Analyzer)	
			Laju Alir	30.22	-	-	m/s	22-0431K/SMM-AAS (Flue Gas Analyzer)	

Isi ringkas:
 S. Kadar Maksimum mengacu pada Peraturan No. 13 Tahun 2008, Lampiran 2.1. Tentang Baku Mutu Emisi Unit Pengolahan Uap Sulfur Sistem Claus untuk Sistem yang dilengkapi dengan Inerterator Gas.

Volume gas keluar dalam keadaan standar (25°C dan tekanan 1 atmosfer)
 - Semua parameter dikoreksi dengan O₂ sebesar 0%

Depok, 18 November 2022
 Manajer Laboratorium

PT. ANUGRAH ANALISIS SEMPURNA
INDONESIA
 Depok



Lampiran 3 Contoh Perhitungan Laju Emisi

Contoh perhitungan laju emisi SO₂ cerobong Hot Oil A di Semester II 2020.

Dik : H : 14,7 m C : 5 mg/m³
 d : 1,1 m T : 320,5 K
 L : 0,95 m v : 20,91 m/s

Penyelesaian :

$$E = \frac{v \times A \times C}{1000}$$

$$= \frac{20,91 \times 0,95 \times 5}{1000}$$

$$= 0,099 \text{ g/s}$$

Contoh perhitungan laju emisi NO₂ cerobong Hot Oil A di Semester II 2020.

Dik : H : 14,7 m C : 6,4 mg/m³
 d : 1,1 m T : 320,5 K
 L : 0,95 m v : 20,91 m/s

Penyelesaian :

$$E = \frac{v \times A \times C}{1000}$$

$$= \frac{20,91 \times 0,95 \times 6,4}{1000}$$

$$= 0,127 \text{ g/s}$$

Contoh perhitungan laju emisi Partikulat cerobong Hot Oil A di Semester II 2020.

Dik : H : 14,7 m C : 10 mg/m³
 d : 1,1 m T : 320,5 K
 L : 0,95 m v : 20,91 m/s

Penyelesaian :

$$E = \frac{v \times A \times C}{1000}$$



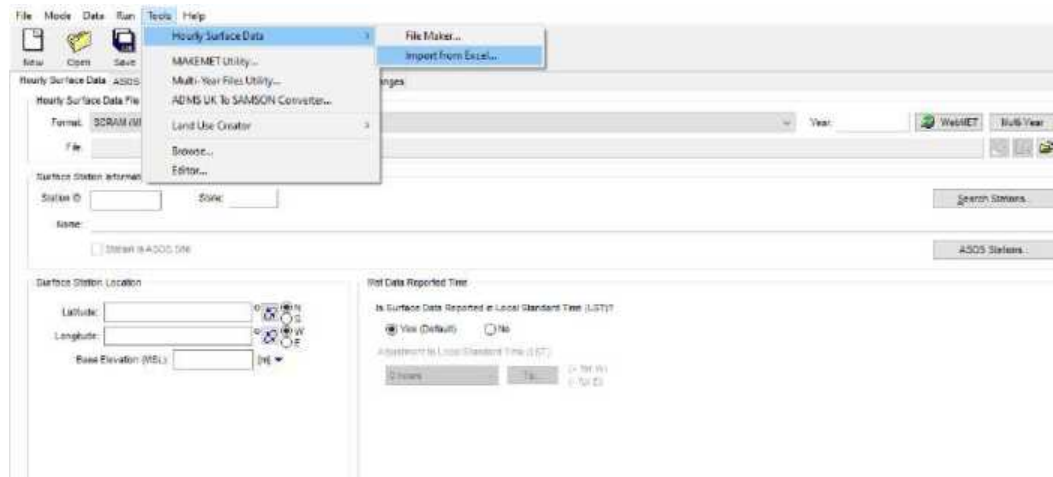
Lampiran 4 Pengolahan WRPLOT View

1. Data Angin diolah dalam format Microsoft Excel 97-Workbook 2016 dengan contoh format sebagai berikut.

	A	B	C	D	E	F
1	Year	Month	Day	Hour	Kecepatan_Angin (m/s)	Arah Angin (Deg)
2	2020	10	4	0	5,880	172,83
3	2020	10	4	1	6,030	173,98
4	2020	10	4	2	6,140	174,38
5	2020	10	4	3	6,240	174,83
6	2020	10	4	4	6,270	175,57
7	2020	10	4	5	6,200	175,88
8	2020	10	4	6	5,970	174,29
9	2020	10	4	7	5,650	171,33
10	2020	10	4	8	5,280	167,01
11	2020	10	4	9	4,760	161,45
12	2020	10	4	10	3,990	155,99
13	2020	10	4	11	3,680	151,21
14	2020	10	4	12	3,450	148,61
15	2020	10	4	13	3,450	148,61
16	2020	10	4	14	3,150	148,28
17	2020	10	4	15	2,810	152,86
18	2020	10	4	16	2,740	157,90
19	2020	10	4	17	2,810	161,36
20	2020	10	4	18	2,920	164,81
21	2020	10	4	19	3,080	167,86
22	2020	10	4	20	3,320	169,70
23	2020	10	4	21	3,510	171,42
24	2020	10	4	22	3,540	173,92
25	2020	10	4	23	3,620	178,64
26						

2. Membuat SAMSON File

- Menginput data angin excel



- Mengatur dan menyesuaikan kolom berdasarkan pengelompokkan tahun, bulan, tanggal, jam, arah, dan kecepatan.

#	Data Field Name	Excel Column Name	Missing Indicator in Excel File	Unit in Excel File	Number Type
1	Year	A			1 to 12
2	Month	B			1 to 12
3	Day	C			1 to 31
4	Hour	D		01 to 24	00 to 23, 01 to 24

Excel File	Year	Month	Day	Hour	Reception_Angle (m/s)	Azimuth_Angle (Deg)
1	2000	10	4	1	172.85	
2	2000	10	4	2	174.28	
3	2000	10	4	3	174.83	
4	2000	10	4	4	175.57	
5	2000	10	4	5	175.88	
6	2000	10	4	6	174.29	
7	2000	10	4	7	172.85	
8	2000	10	4	8	167	
9	2000	10	4	9	161.45	
10	2000	10	4	10	155.99	
11	2000	10	4	11	151.21	
12	2000	10	4	12	146.81	
13	2000	10	4	13	146.81	
14	2000	10	4	14	146.38	
15	2000	10	4	15	152.86	
16	2000	10	4	16	157.90	

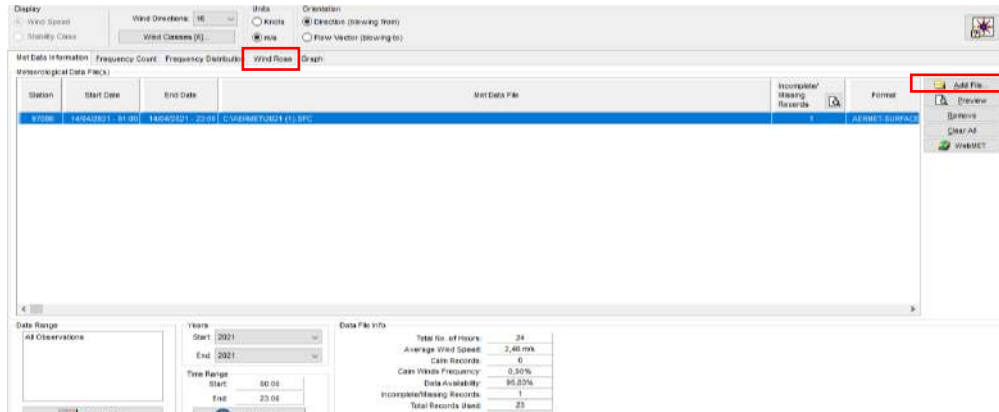
- Mengisi data stasiun BMKG pada menu Station Information setelah itu memilih Import untuk menyimpan kedalam format SAMSON.

Excel File	Year	Month	Day	Hour	Reception_Angle (m/s)	Azimuth_Angle (Deg)
1	2000	10	4	1	172.85	
2	2000	10	4	2	174.28	
3	2000	10	4	3	174.83	
4	2000	10	4	4	175.57	
5	2000	10	4	5	175.88	
6	2000	10	4	6	174.29	
7	2000	10	4	7	172.85	
8	2000	10	4	8	167	
9	2000	10	4	9	161.45	
10	2000	10	4	10	155.99	
11	2000	10	4	11	151.21	
12	2000	10	4	12	146.81	
13	2000	10	4	13	146.81	
14	2000	10	4	14	146.38	
15	2000	10	4	15	152.86	
16	2000	10	4	16	157.90	



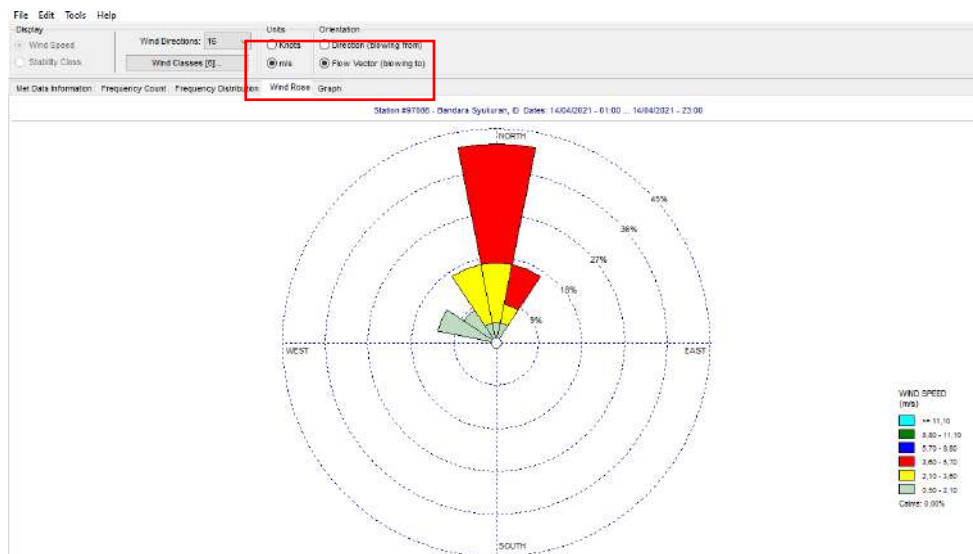
- Membuat *Windrose*

Memasukkan file SAMSON yang telah dibuat dengan cara memilih menu *Add Files* kemudian pilih *Tab Wind Rose*



3. Mengatur *Windrose*

Mengatur arah sesuai yang diinginkan pada menu *Wind Direction*. Selanjutnya pada menu *Units* mengubah satuan menjadi m/s dan pada menu *Orientation* memilih *Flow Vector (blowing to)*.



Lampiran 5 Pengolahan AERMET View

1. Data meteorologi diolah dalam format Microsoft Excel 2016 dengan contoh format sebagai berikut.

1	Year	Month	Day	Hour	Temperature (C)	Tekanan (mbar)	Kecepatan_Angin (m/s)	Ceiling Height (m)	Precipitation (mm)	Radiation (Wh/m2)	Arah Angin (Deg)	Relative Humidity (%)
2	2021	11	30	0	26,226	1014,336	0,070	556,213	0,04	414,89	110,56	71
3	2021	11	30	1	26,111	1013,661	0,140	683,018	0,05	409,89	263,66	67,5
4	2021	11	30	2	26,058	1013,404	0,450	761,496	0,05	421,71	228,53	64,38
5	2021	11	30	3	26,014	1012,587	0,810	556,487	0,04	411,68	227,35	62,12
6	2021	11	30	4	25,972	1012,749	0,840	756,915	0,01	414,22	223,49	60,75
7	2021	11	30	5	25,976	1012,981	0,630	484,024	0,01	419,43	212,91	60,38
8	2021	11	30	6	25,990	1013,716	0,380	490,094	0,02	417,76	172,87	60,69
9	2021	11	30	7	26,046	1014,370	0,600	539,478	0,00	420,37	95,19	61,94
10	2021	11	30	8	26,163	1014,723	1,200	555,844	0,00	423,75	60,44	64,56
11	2021	11	30	9	26,278	1015,236	1,760	567,336	0,00	430,12	62,30	67,88
12	2021	11	30	10	26,315	1015,781	2,080	664,536	0,00	420,87	50,80	73,94
13	2021	11	30	11	26,421	1014,748	2,500	627,948	0,00	420,89	27,13	76,94
14	2021	11	30	12	26,524	1013,928	2,840	627,704	0,00	418,63	9,67	78,44
15	2021	11	30	13	26,640	1012,990	2,660	673,767	0,00	418,63	358,48	79,25
16	2021	11	30	14	26,715	1012,226	2,310	703,214	0,00	412,50	324,92	79,44
17	2021	11	30	15	26,761	1011,622	2,150	753,693	0,00	421,04	324,92	79,75
18	2021	11	30	16	26,814	1011,388	2,280	677,999	0,00	418,22	303,96	79,75
19	2021	11	30	17	26,859	1011,106	2,410	705,823	0,00	415,82	291,66	80,31
20	2021	11	30	18	26,884	1011,357	2,470	764,867	0,01	419,48	288,66	80,88
21	2021	11	30	19	26,902	1011,832	2,390	737,954	0,01	426,86	290,45	81

2. Penginputan file Excel pada AERMET View untuk membuat Data Samson

Import Surface Data from (Excel File): C:\AERMET2020 (2)\xlsx Save Surface File As (SAMSON Format): C:\AERMET2020 (2)\sam

Data Fields Station Information

#	Data Field Name	Excel Column Name	Missing Indicator in Excel File	Unit in Excel File	Number Type
1	Year	A		N/A	YY, YYYY
2	Month	B		N/A	1 to 12
3	Day	C		N/A	1 to 31
4	Hour	D		01 to 24	00 to 23, 01 to 24

First Row to Import: 1 Last Row to Import: 2785

Excel File: SAMSON File

	A	B	C	D	E	F	G	H	I	J	K	L
1	Year	Month	Day	Hour	Temperature (C)	Tekanan (mbar)	Kecepatan_Angin (m/s)	Ceiling Height (m)	Precipitation (mm)	Radiation (Wh/m2)	Arah Angin (Deg)	Relative Humidity (%)
2	2020	10	4	0	24	1013	6	277	0	396,75	172,83	81,7
3	2020	10	4	1	24	1013	6	235	0	406,40	173,98	81,3
4	2020	10	4	2	24	1012	6	239	0	400,43	174,38	80,6
5	2020	10	4	3	24	1012	6	271	0	397,51	174,83	80,1
6	2020	10	4	4	24	1012	6	288	0	404,43	175,57	80,3
7	2020	10	4	5	24	1012	6	306	0	399,60	175,88	80,4
8	2020	10	4	6	24	1013	6	340	0	410,78	174,29	80,6
9	2020	10	4	7	24	1014	6	316	0	388,72	171,33	80,9
10	2020	10	4	8	24	1014	5	307	0	394,29	167	82
11	2020	10	4	9	24	1015	5	338	0	388,72	163,45	83,9
12	2020	10	4	10	24	1015	4	345	0	390,99	155,99	87
13	2020	10	4	11	24	1014	4	367	0	385,43	151,21	88,1
14	2020	10	4	12	24	1014	3	367	0	391	148,61	88,6
15	2020	10	4	13	24	1013	5	403	0	393,62	148,61	88,6

3. Penginputan data stasiun kedalam AERMET dapat dilihat dibawah ini.

Data Fields Station Information

Station ID: 97086 City: BANDARA SYUKURAN State: ID

Latitude: 1,04 Longitude: 122,7

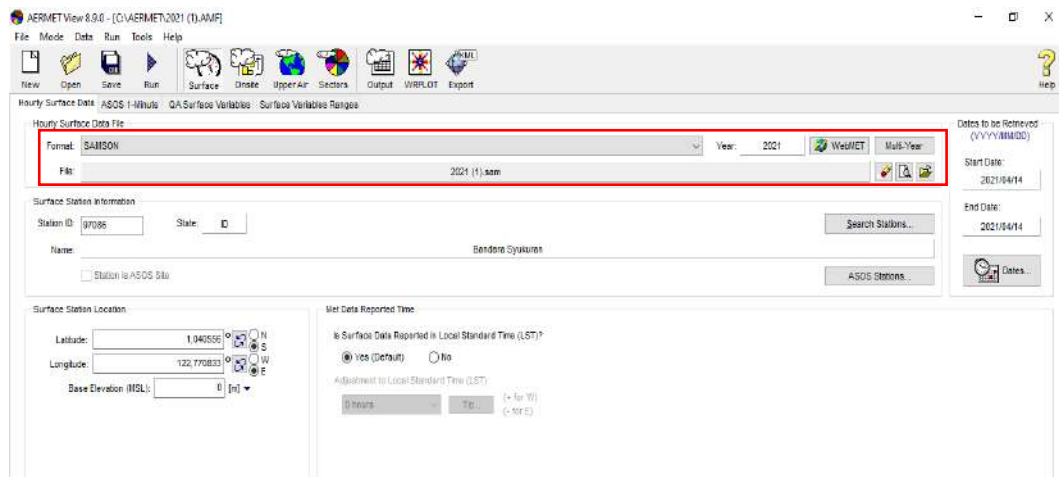
Time Zone: UTC+7 (Bangkok)

Station Elevation (MSL) [m]: (Optional)

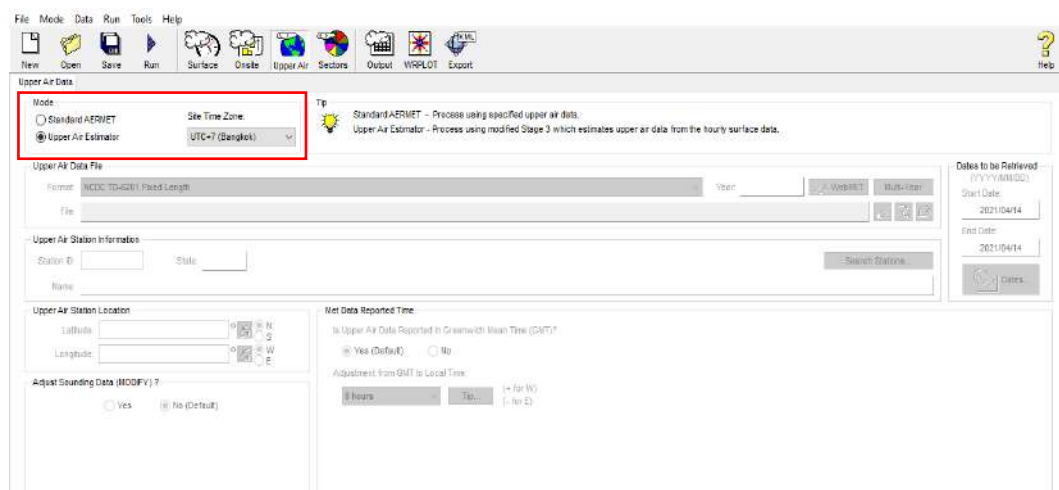
Search Stations...



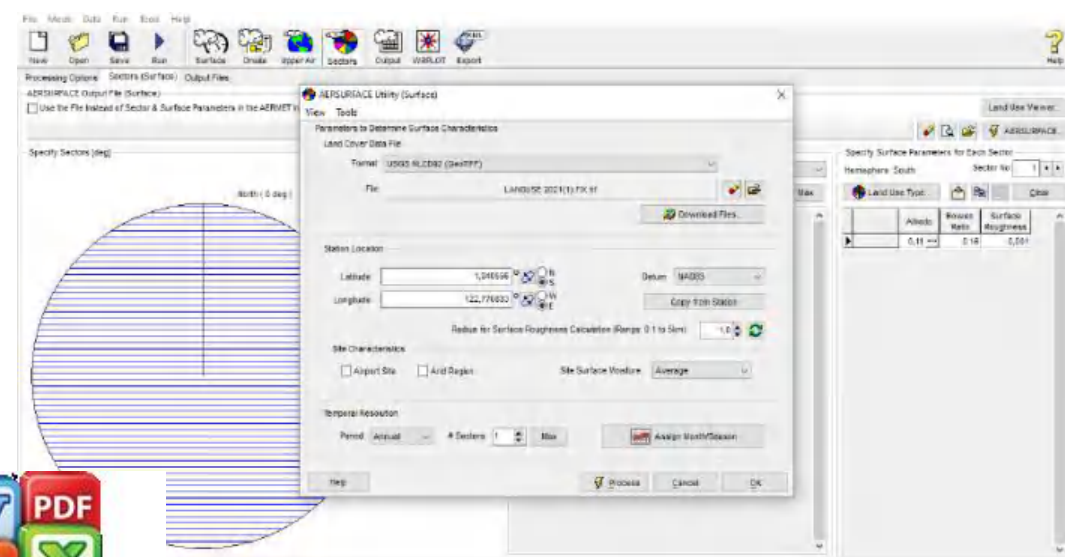
4. Penginputan file .SAM



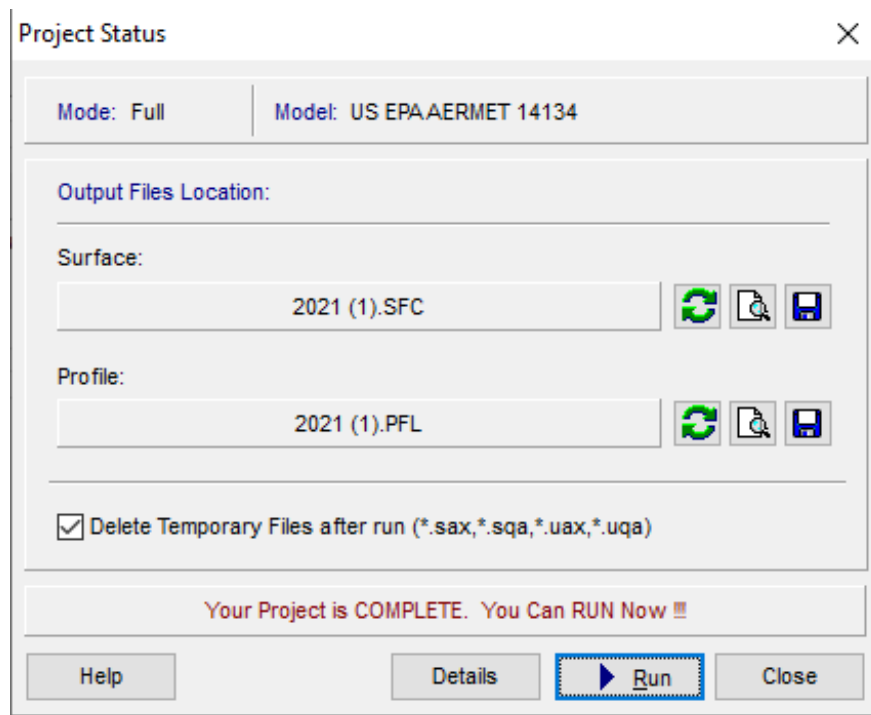
5. Penginputan data Upper Air dengan memilih Upper Air Estimator



6. Pembagian dan pemilihan sektor

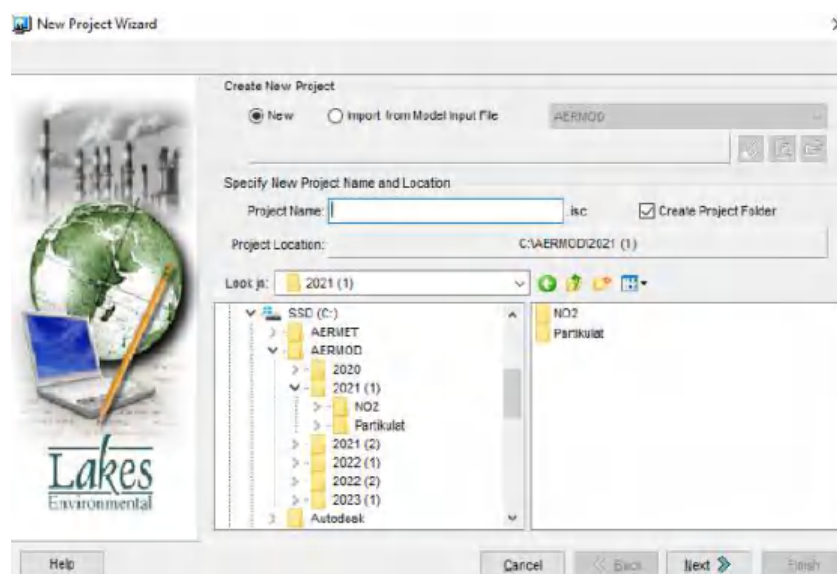


7. Running AERMET

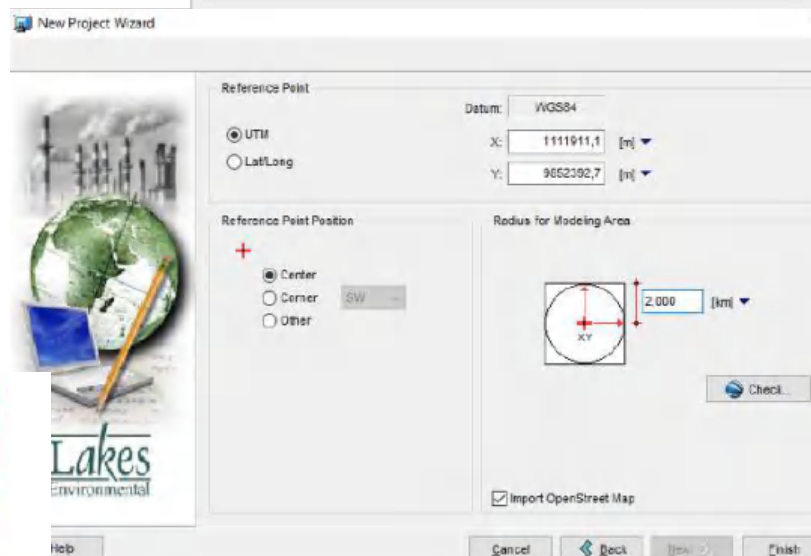


Lampiran 6 Pengolahan AERMOD View

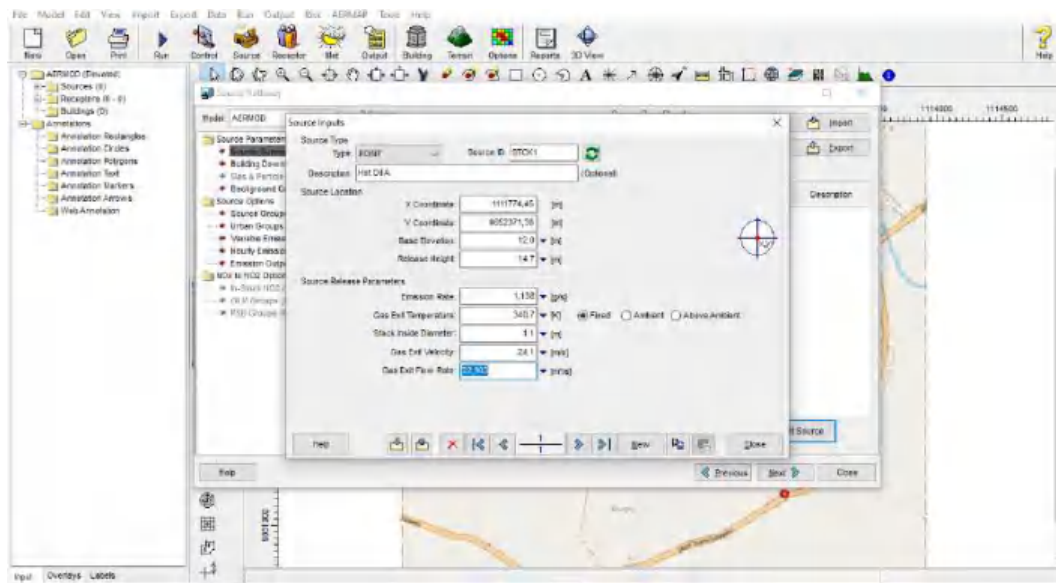
1. Memulai AERMOD



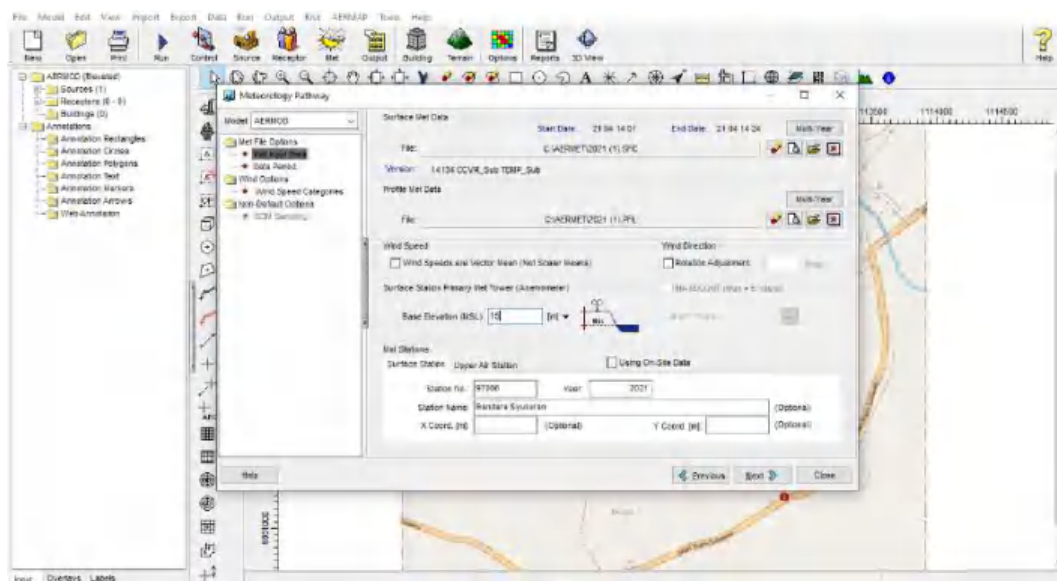
2. Menentukan sistem koordinat, datum, dan titik acuan



3. Memasukkan data sumber emisi

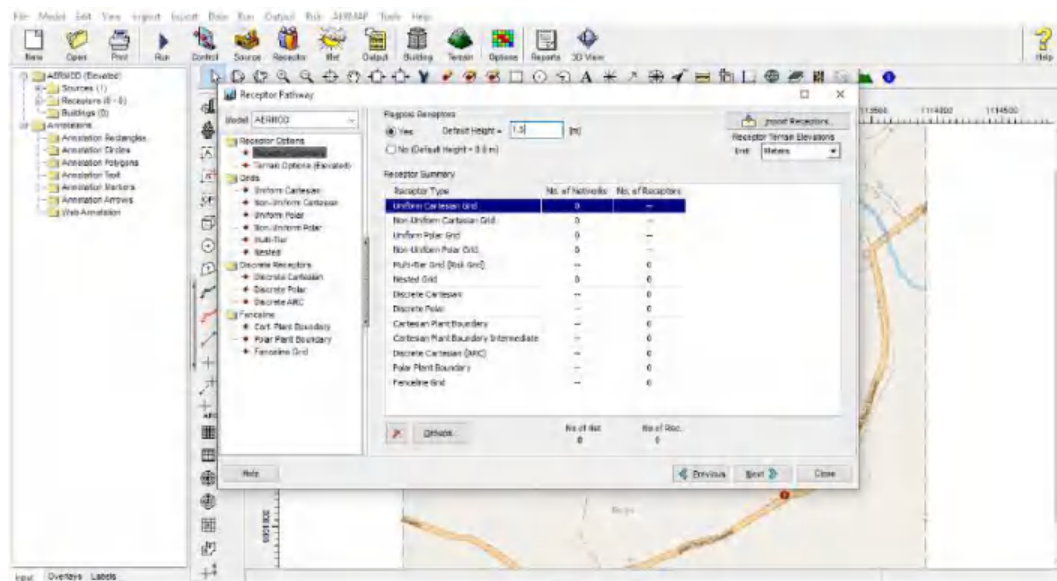


4. Memasukkan data meteorologi

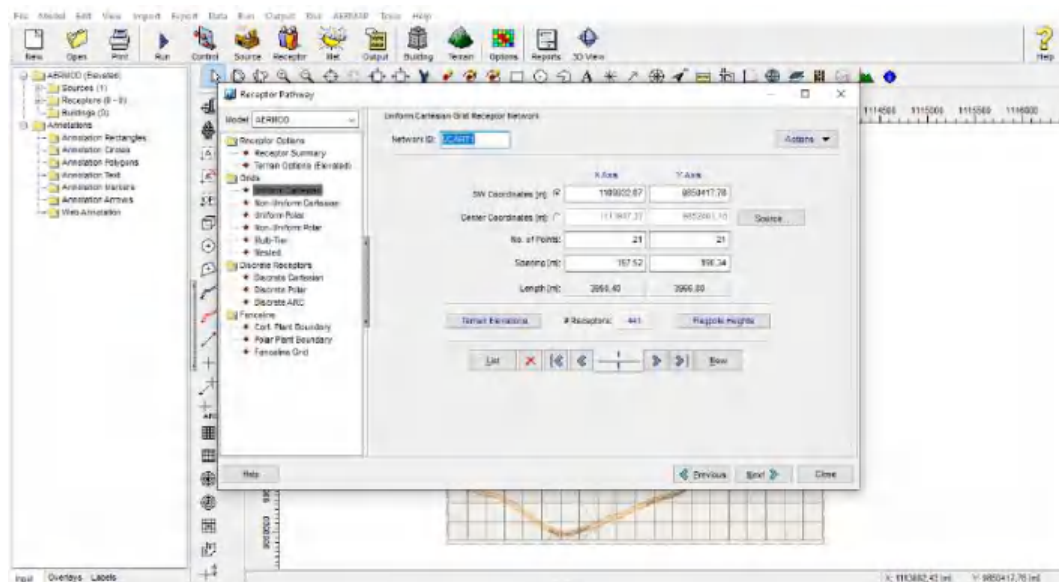


5. Menentukan reseptor

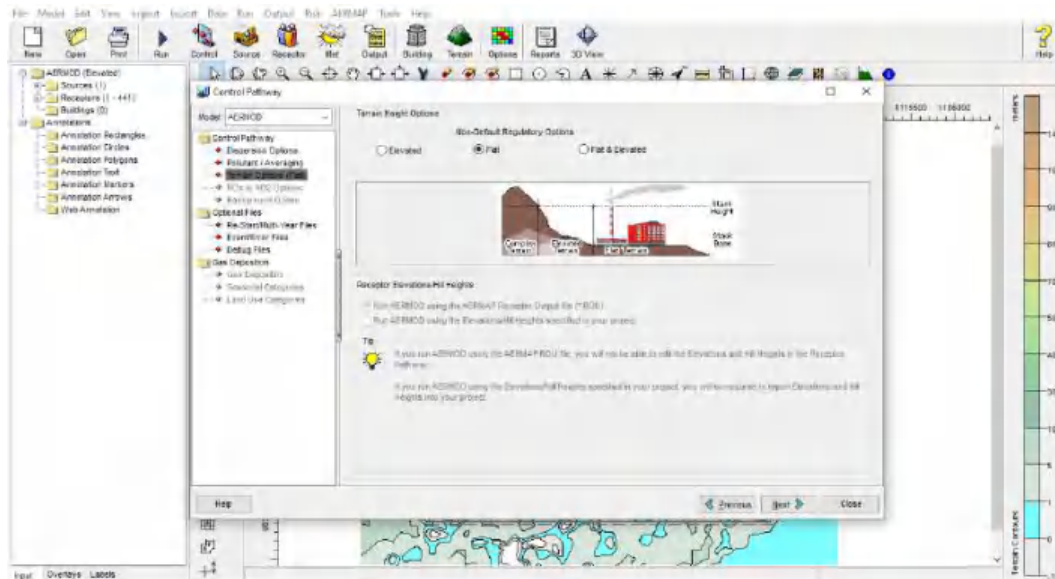
- Mengisi *flagpole receptor* 1,5 m di bagian *receptor summary*



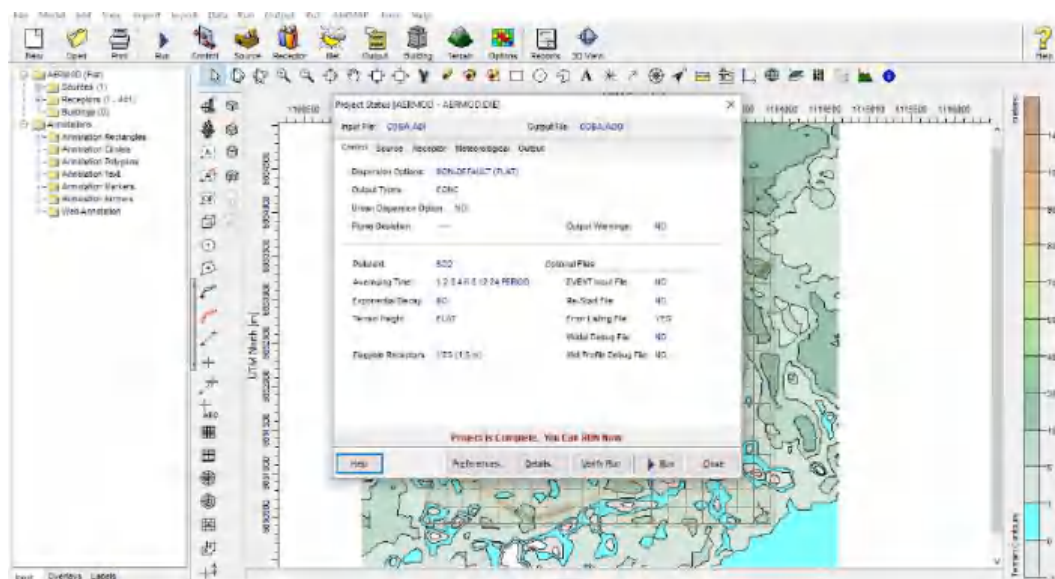
- Mengisi *Uniform Cartesian* di bagian *Grid* menggunakan *Uniform Cartesian Grid*



- *Control Pathway pada Terrain Option*

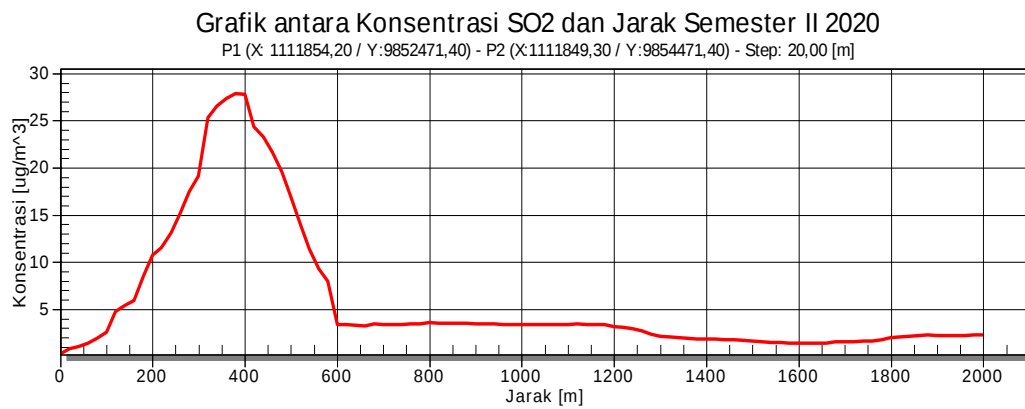


- *Running AERMOD*

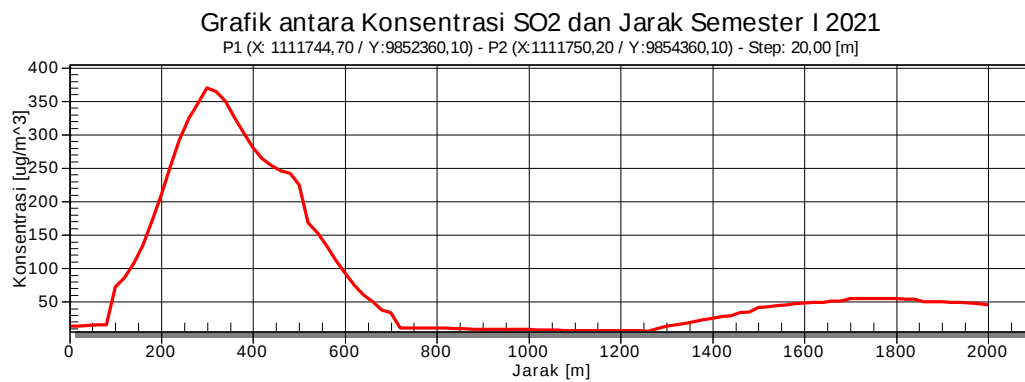


Lampiran 7 Grafik antara Konsentrasi dan Jarak

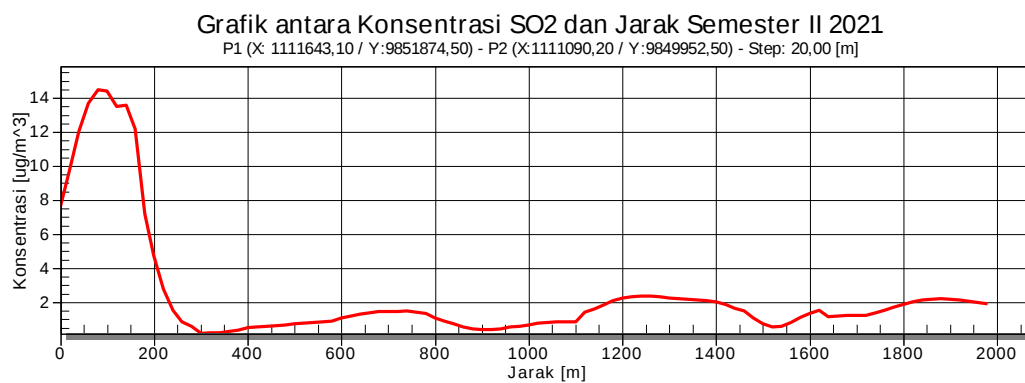
1. SO₂ Semester II 2020



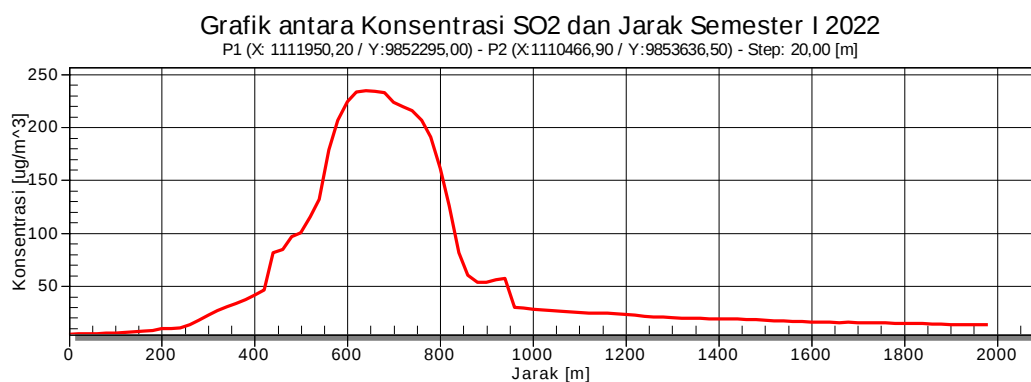
2. SO₂ Semester I 2021



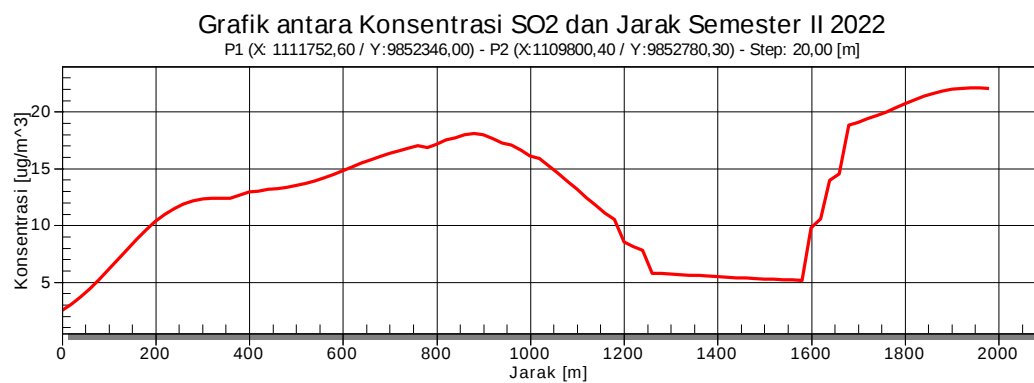
3. SO₂ Semester II 2021



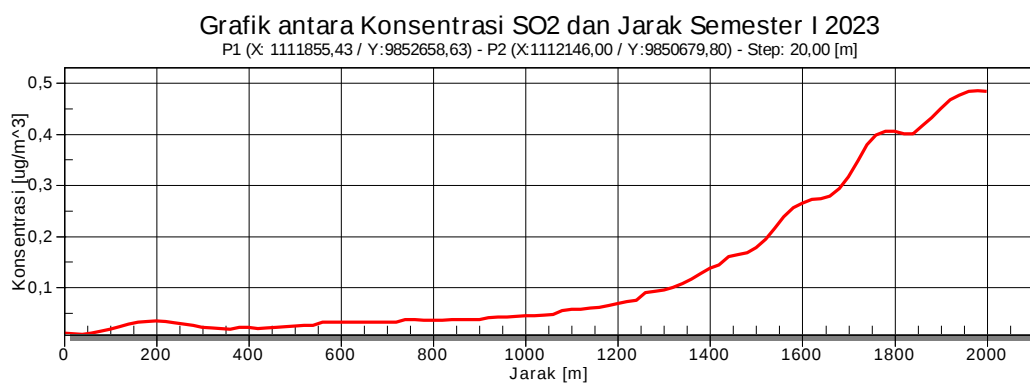
4. SO₂ Semester I 2022



5. SO₂ Semester II 2022



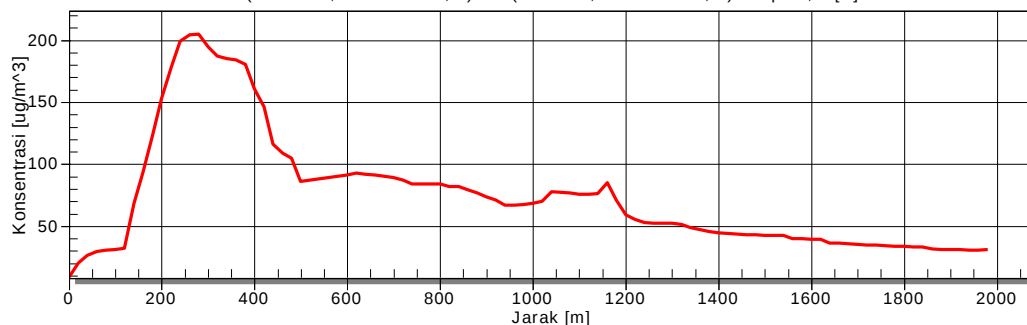
6. SO₂ Semester I 2023



7. NO₂ Semester II 2020

Grafik antara Konsentrasi NO₂ dan jarak Semester II 2020

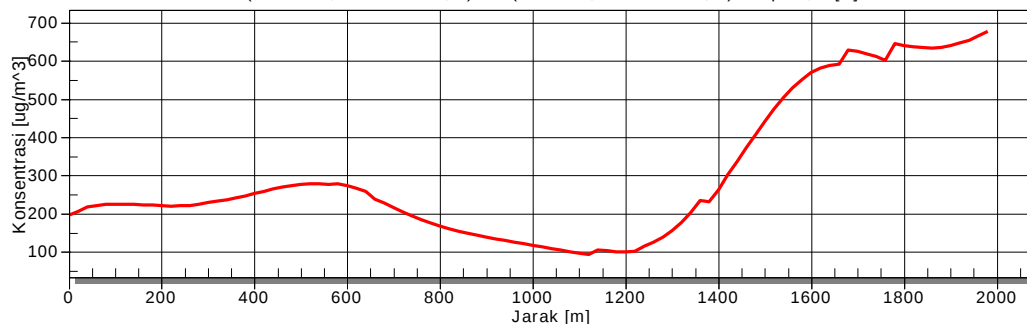
P1 (X: 1111954,40 / Y:9852562,90) - P2 (X:1111671,00 / Y:9854542,70) - Step: 20,00 [m]



8. NO₂ Semester I 2021

Grafik antara Konsentrasi NO₂ dan Jarak Semester I 2021

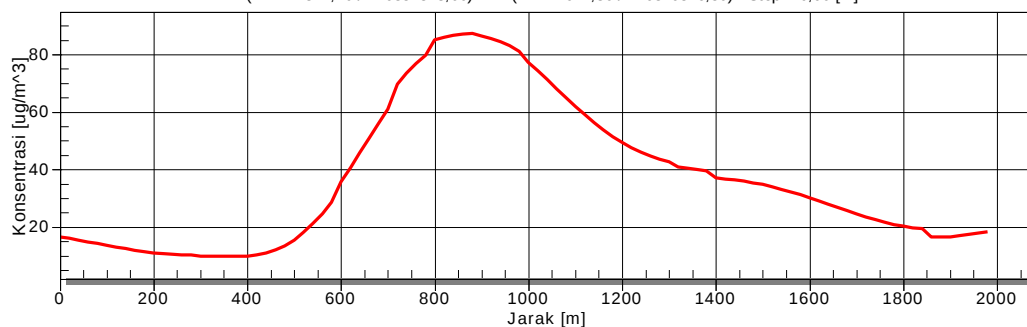
P1 (X: 1111971,10 / Y:9852376,90) - P2 (X:1111116,80 / Y:9854185,20) - Step: 20,00 [m]



9. NO₂ Semester II 2021

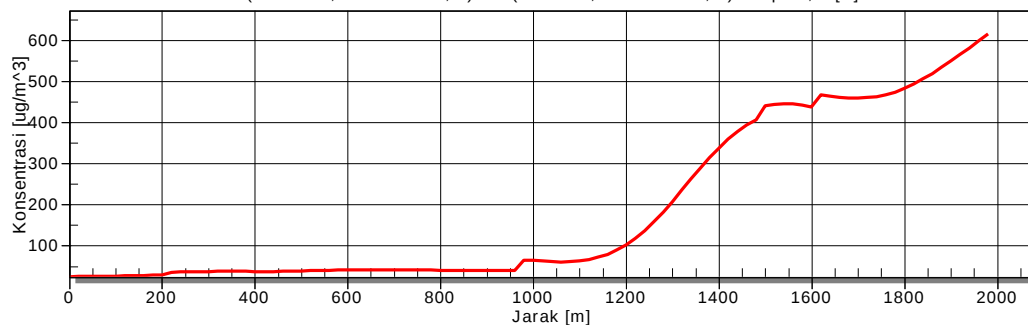
Grafik antara Konsentrasi NO₂ dan Jarak Semester II 2021

P1 (X: 1111344,70 / Y:9851328,60) - P2 (X:1111611,30 / Y:9849346,50) - Step: 20,00 [m]

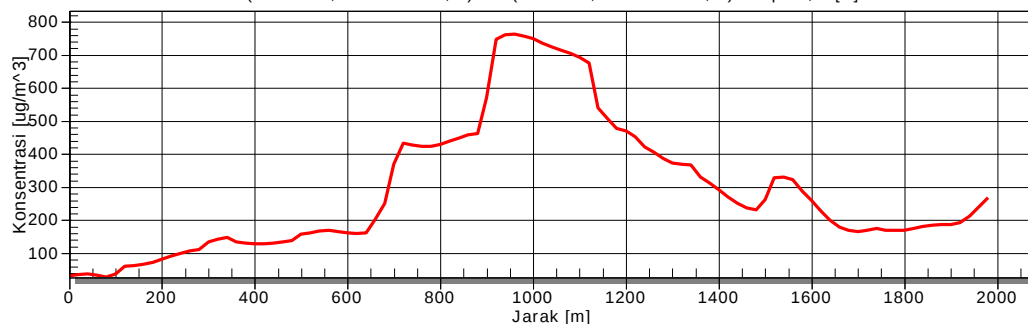


10. NO₂ Semester I 2022Grafik antara Konsentrasi NO₂ dan Jarak Semester I 2022

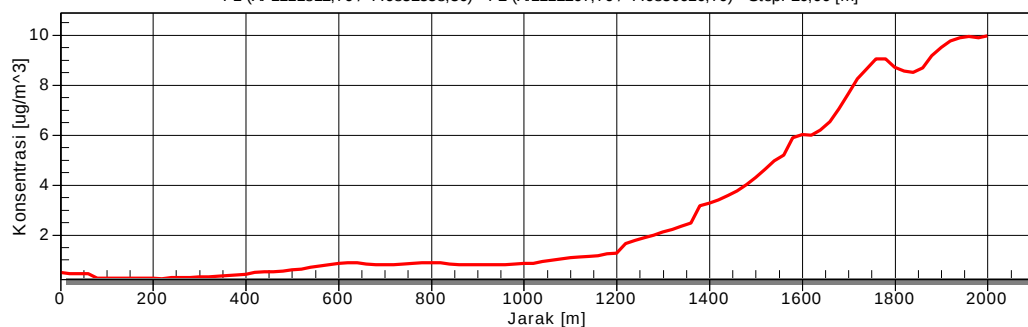
P1 (X: 1111969,70 / Y:9852521,60) - P2 (X:1111078,80 / Y:9854312,20) - Step: 20,00 [m]

11. NO₂ Semester II 2022Grafik antara Konsentrasi NO₂ dan Jarak Semester II 2022

P1 (X: 1111913,00 / Y:9852374,90) - P2 (X:11109929,10 / Y:9852627,80) - Step: 20,00 [m]

12. NO₂ Semester I 2023Grafik antara Konsentrasi NO₂ dan Jarak Semester I 2023

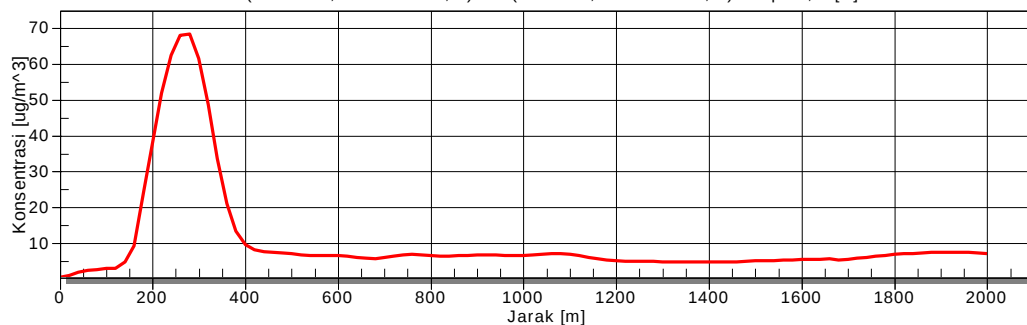
P1 (X: 1111812,70 / Y:9852558,30) - P2 (X:1112267,70 / Y:9850610,70) - Step: 20,00 [m]



13. Partikulat Semester II 2020

Grafik antara Konsentrasi Partikulat dan Jarak Semester II 2020

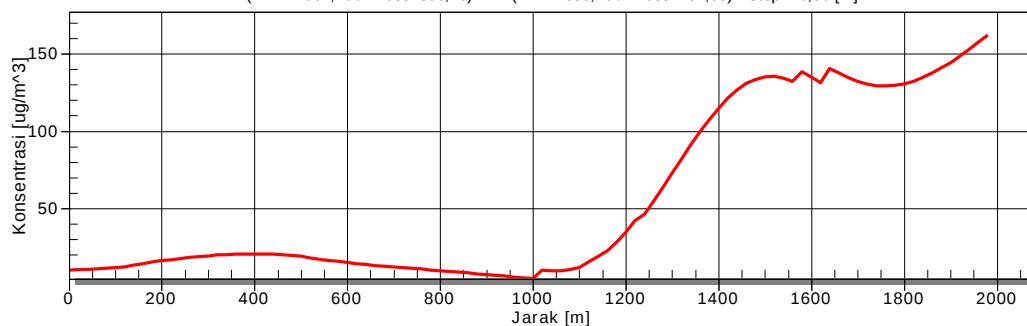
P1 (X: 1111954,50 / Y:9852510,50) - P2 (X:1112013,50 / Y:9854509,70) - Step: 20,00 [m]



14. Partikulat Semester I 2021

Grafik antara Konsentrasi Partikulat dan Jarak Semester I 2021

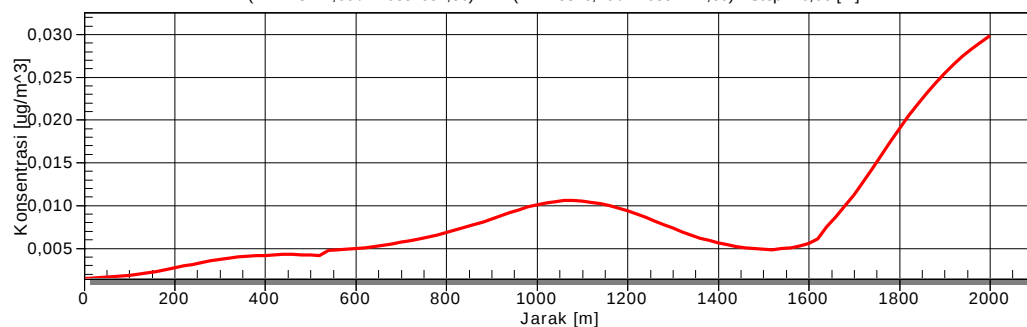
P1 (X: 1111997,70 / Y:9852506,20) - P2 (X:1111088,40 / Y:9854287,50) - Step: 20,00 [m]



15. Partikulat Semester II 2021

Grafik antara Konsentrasi Partikulat dan Jarak Semester II 2021

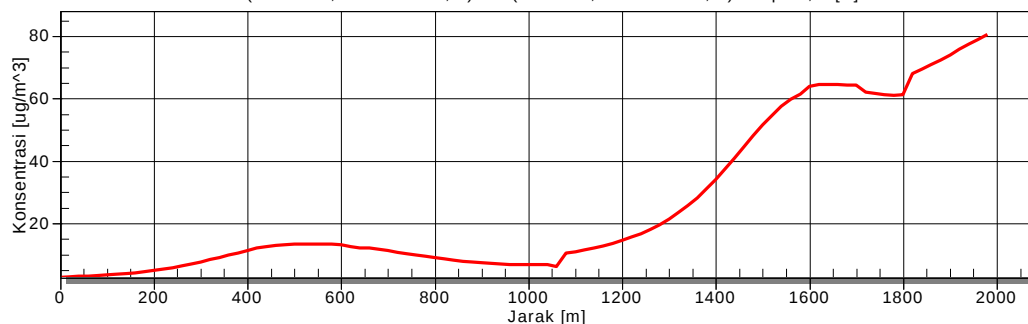
P1 (X: 1113471,60 / Y:9851957,50) - P2 (X:1115310,70 / Y:9851171,50) - Step: 20,00 [m]



16. Partikulat Semester I 2022

Grafik antara Konsentrasi Partikulat dan Jarak Semester I 2022

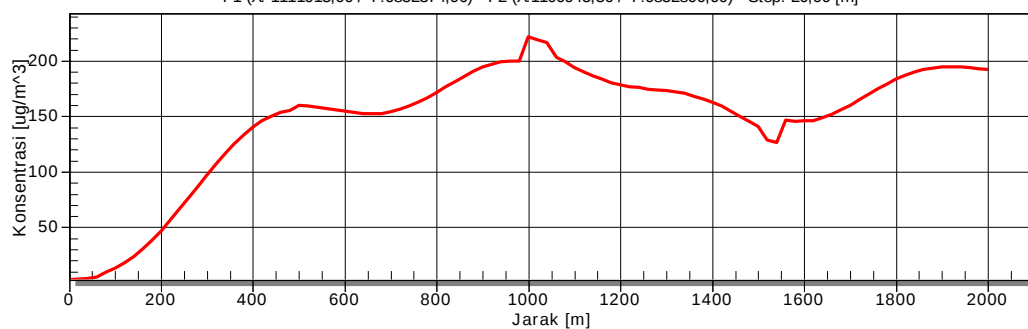
P1 (X: 1112121,20 / Y:9852448,60) - P2 (X:1111279,20 / Y:9854262,70) - Step: 20,00 [m]



17. Partikulat Semester II 2022

Grafik antara Konsentrasi Partikulat dan Jarak Semester II 2022

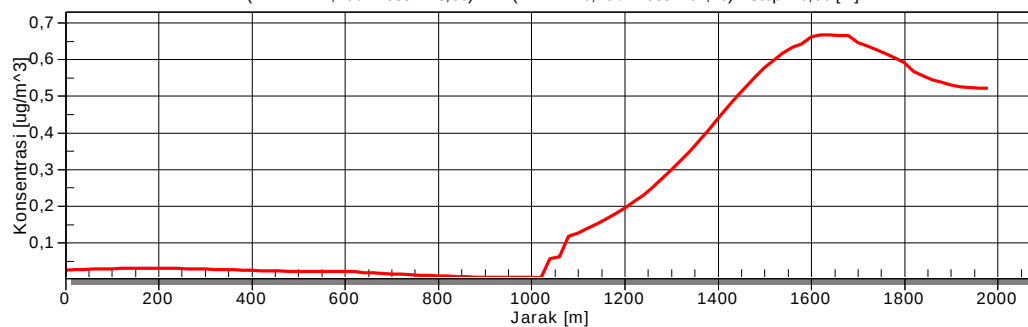
P1 (X: 1111913,00 / Y:9852374,90) - P2 (X:1109945,30 / Y:9852800,90) - Step: 20,00 [m]



18. Partikulat Semester I 2023

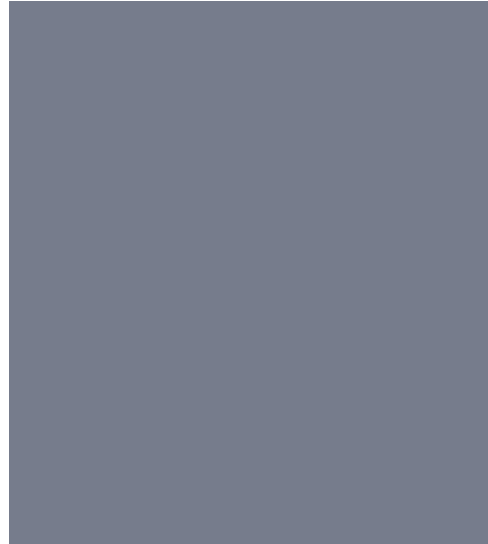
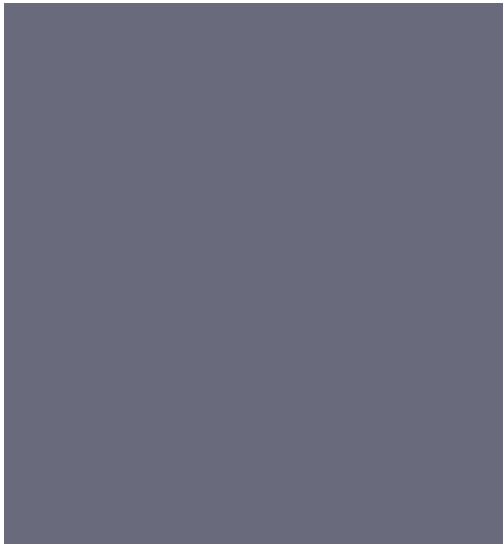
Grafik antara Konsentrasi Partikulat dan Jarak Semester I 2023

P1 (X: 1112121,20 / Y:9852448,60) - P2 (X:1111279,20 / Y:9854262,70) - Step: 20,00 [m]



Lampiran 8 Dokumentasi Pengukuran







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