

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF ENFORCEMENT

EPA-330/1-80-005

OMEGA-1 LIDAR: DATA ANALYSIS REPORT
CENTRAL ILLINOIS LIGHT COMPANY
EDWARDS STATION

Bartonville, Illinois

October 1980

NATIONAL ENFORCEMENT INVESTIGATIONS CENTER
Denver, Colorado



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I. INTRODUCTION

The National Enforcement Investigations Center (NEIC) conducted an investigation of visible emissions from two stationary sources at the Edwards Generating Station operated by Central Illinois Light Company (CILCO), in Bartonville, Illinois, during the period from June 3 through 4, 1980. Opacities of observed visible emissions were measured remotely with a new instrumentation method* using the NEIC Omega-1 Lidar. Figure 1 depicts the location of the Lidar during the observations.

The Edwards Station contains three boilers each being equipped with an electrostatic precipitator. The particulate emissions from boilers 1 and 2, generating capacities of 130 and 268 megawatts, respectively, are discharged through Stack 1 which is 503 ft in height and the diameter is about 10.5 ft. The emissions from boiler 3, generating capacity of 350 megawatts, are discharged through Stack 2 being 503 ft high and about 12.5 ft in diameter. Visible emissions from these sources are alleged to be in violation of the applicable opacity limits of the Illinois State Implementation Plan (SIP) during the peak-power demand periods occurring in early morning and late afternoon.

On April 21, 1980, the Enforcement Division of EPA, Region V, Chicago, Illinois, requested assistance from NEIC in documenting the opacity of the emissions from the Edwards Station during early morning and late afternoon time periods.

To provide the requested assistance to Region V, NEIC conducted the investigation with the following objectives:

1. Document the opacity of visible emissions from Stacks 1 and 2.
2. Evaluate the compliance of the observed emissions with the Illinois SIP.
3. Evaluate if emissions from the Edwards Station were greater in early morning hours than during the late afternoon period.

* This method has been proposed in the Federal Register, Vol. 45, No. 128, Tuesday, July 1, 1980, pages 44329 through 44351, as an alternate method to Reference Method 9.

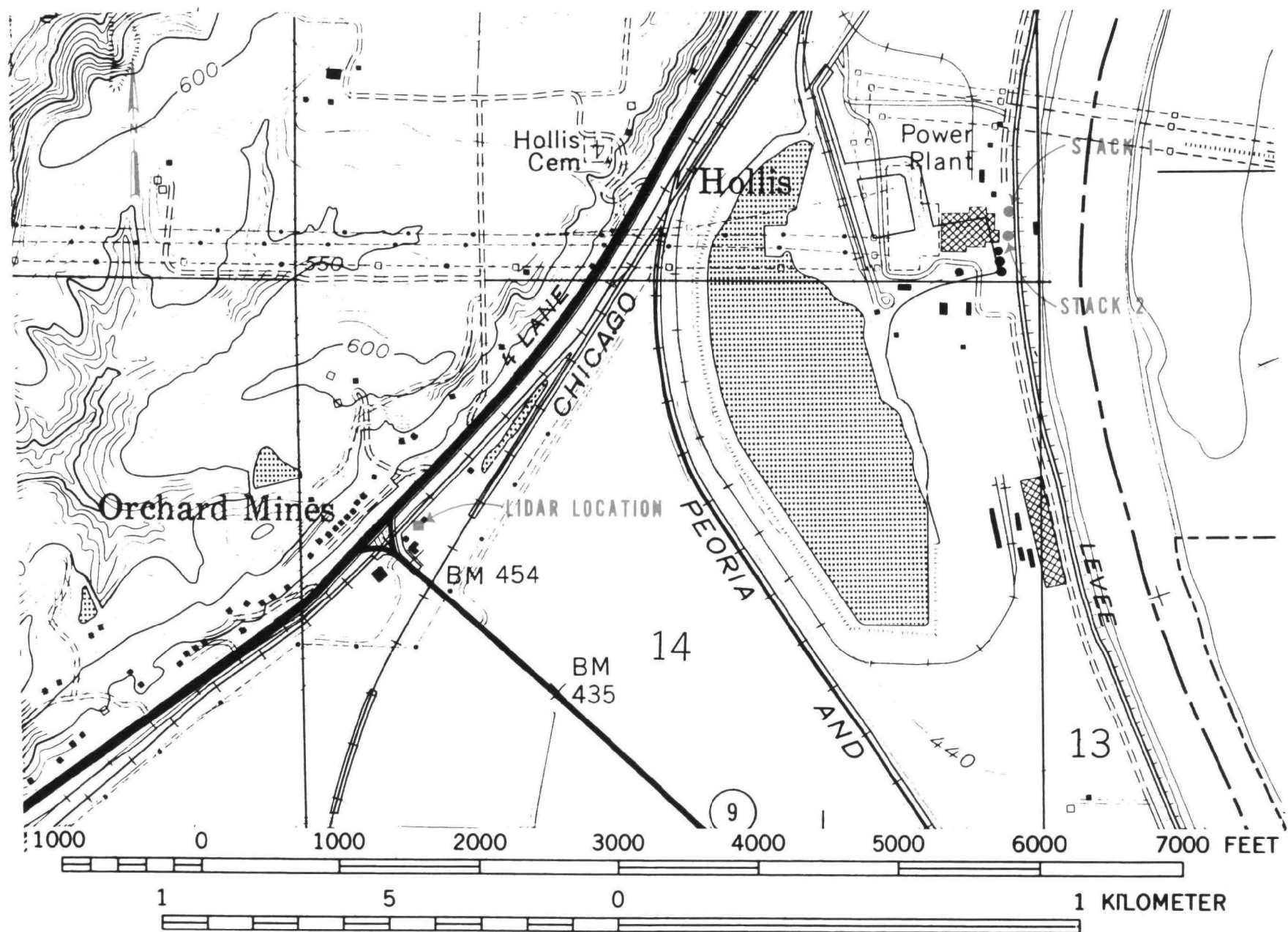


Figure 1. Location Map

II. SUMMARY AND CONCLUSIONS

SUMMARY OF INVESTIGATION

The opacity of visible emissions from the two stationary sources within the Edwards Generating Station, Central Illinois Light Company (CILCO), Bartonville, Illinois, were measured during the period from June 3 through June 4, 1980. The sources investigated were Stacks 1 and 2. Stack 1 was observed during late afternoon and early morning hours. Stack 2 was observed during early morning hours. All measurements were conducted remotely from off the plant site.

Opacities were measured remotely with the NEIC Omega-1 Lidar which is a new instrumentation method. The method has been proposed in the Federal Register as Alternate Method 1 to Reference Method 9.

All opacity measurements were subsequently analyzed and reduced with the NEIC laboratory computer using the methods given in Alternate Method 1 (proposed).

Five sets of opacity measurements were made, the total of which was about 1.75 hrs of observation and about 600 individual measurements. The set of measurements ranged in length from 14 to 30 minutes. Measurements were made at a temporal frequency range from once about every 9 to 10 seconds.

The results of the lidar observation are summarized in Table 1 according to the official designation of each stationary source.

Table 1
DATA ANALYSIS SUMMARY
CILCO, Edwards Generating Station
Bartonville, Illinois

Source Designation	Applicable Opacity Limit (%)	Date June 1980	Time Interval (hr min sec)	Approx length of Observation (min)	Approx. Time Exceeding Limit (min)	% of Time in Excess of limit	± Max. Lidar Calibration	
							Peak Opacity (6-min avg.)	Error Mag (%) [From 0% to 80%]
Stack 1	30	3	18.46 38 19 16 49	30	30	100	80	-0.3, +0.3
Stack 1	30	3	19:22:49 19:52:36	30	30	100	81	-0.3, +0.3
Stack 2	30	4	7.14 50 7 29 40	15	0	0	2	-0.3, +0.3
Stack 1	30	4	7 41:50 7:57:30	16	11	69	42	-0.1, +0.1
Stack 2	30	4	8 27.49 8.41 21	14	0	0	28	-0.6, +0.1

CONCLUSIONS

The visible emissions from Stack 1 exceeded the maximum allowable limit of the Illinois State Implementation Plan (30% for a 6-minute average) each time the stack was observed. For three observation periods ranging in length from 16 to 30 minutes, totaling 76 minutes, the emissions exceeded the limit for 71 minutes or 93% of the observation time. The data revealed that the emissions in late afternoon were significantly greater than during the early morning hours.

The emissions from Stack 2 were observed through two observation periods extending from 14 to 15 minutes. The emissions did not exceed the SIP opacity limit (30% for a 6-minute average) during these times.

III. METHODS

LIDAR OPACITY MEASUREMENTS

Alternate Method 1 (proposed) employs a lidar (lasar radar) which is an optical system installed in a truck-mounted van enclosure. This mobile lidar is specifically designed and fabricated for measuring the opacity of visible emissions from a given stationary source during both day and night-time ambient lighting conditions. The laser transmitter within the lidar emits a short pulse of light. The lidar receiver collects the laser light backscattered from the atmospheric aerosols before and beyond the visible plume as well as that from the aerosols (particulates) within the plume. The lidar receiver converts the backscattered optical signals to electronic signals or data. The Lidar has an inherent data processing capability that calculates the opacity values from the backscatter data from just before and beyond the plume. It subsequently records these opacity values in hard copy form, and also records the original lidar receiver data (signal amplitude vs range) on magnetic tape for future reference or use.

The nominal data gathering rate of the lidar is an opacity measurement or determination once every 10 seconds. This data rate can be maintained in continuous operation for minutes or even hours. The lidar method is intended for use during nighttime, as well as during the day.

The Omega-1 Lidar is internally calibrated in the field periodically over the opacity values of 0, 10, 20, 40, 60, and 80%.

DATA ANALYSIS AND REDUCTION

The lidar data were analyzed in accordance with Section 2 of Alternate Method 1 (proposed) using the NEIC PDP-11-70 laboratory computer. The

individual opacity values were calculated using the backscatter data recorded on magnetic tape, with the opacity equation given in Section 2.4.1. The associated statistics which includes the standard deviation, S_o , of each individual opacity value, were calculated using the appropriate equations in Section 2.4.1. The running- or sliding-average, \bar{O}_p , of the individual opacity values was calculated over the 6-minute averaging interval, given in the Illinois State Implementation Plan (SIP), according to the requirements of Section 2.4.2.

The number of opacity values included in the running-average is nominally 36 (six measurements/minute for 6 minutes according to the SIP). The 6-minute interval remains constant although the number of opacity values may vary above or below the nominal. In accordance with the Opacity Data Acceptance/Rejection Criterion in Section 2.4.3, if the standard deviation, S_o , for a given opacity value is greater than 8% (full scale) then that value is discarded from the running-average set decreasing the total number by one. The number of opacity values in the 6-minute interval may be greater than 36 which is caused by the lidar data rate being set faster than six opacity measurements/minute (one opacity measurement every 10 seconds).

DATA PRESENTATION

The opacity values are presented in two separate formats in Section IV of this data analysis report. For each data run the values are given in tabular form followed by graphic plots. An identification header is located across the top of the tabular form which provides the following information:

- EPA-NEIC identification block.
- EPA-NEIC Omega control number (evidentiary parameter).
- Official designation for the stationary source.
- Facility name.
- Facility location.
- Location of the lidar during tests.
- Length of the running average interval.

This tabular presentation provides the applicable data in columns identified as follows:

- Date of data run.
- Time of the opacity measurement (nearest second).
- Opacity values as calculated in %.
- Standard deviation SO (S_o in Alternate Method 1) in %.
- Individual violation flags, not applicable in Illinois.
- Average opacity (%) calculated over the running-average interval.
- Average standard deviation (%) calculated over the running-average interval.
- Average opacity violation flag, applicable in Illinois.
- Number of opacity values discarded due to the Opacity Data Acceptance/Rejection Criterion (§ 2.4.3 of the Alternate Method 1).

In the average opacity violation column, any violations that occurred over and above the 30% (SIP) average opacity limit are indicated with a flag of four asterisks.

Referring to the first sheet of the tabular data output, Section IV, for the first data run, (Omega-0044), the average opacity violation flag (column 8 in the tabular format) does not show up until 6 minutes of data has been averaged. If the average opacity is greater than 30% then the first violation flag occurs at the end of the first 6-minute interval and continues until the average opacity drops below the regulation limit or the data run is completed. This data run began at 18:46:38 and the individual opacity values were all above 30% (column 3). The average opacity (column 6) reads zero until 6 minutes of data has been recorded. At the end of the first 6-minute interval (18:46:38 to 18:52:19) the average opacity was calculated to be 79% and the first average opacity violation flag is indicated.

The running-average permits one to easily locate the 6-minute interval(s) which has the highest average opacity. In the example of the first

data run (Omega-0044), the highest average occurred for the 6-minute interval ending at 18:56:27 (sheet 2) and continued until 19:00:43 (sheet 2). However, the first violation occurred for the 6-minute time interval ending at 18:52:19. The next violation does not occur until 6 minutes after 18:52:19 or 18:58:19 which had an average opacity of 80%. The third consecutive violation occurred at 19:04:23 with an average opacity of 78%, and so forth.

A note of explanation is provided for an occasional zero that may occur in the "Average Opacity" and the "Average S0" columns (column 6 and 7 in the tabular form) after the initial 6 minutes' worth of data required for the running average has been recorded. The computer data analysis software is programmed so that the 6-minute interval must be maintained to within ± 15 seconds or the running-average is not calculated for that particular interval. An example is provided in the first data run for Stack 1. The running-average violation flag (column 8) is missing from 18:52:39, and the Average Opacity = 0 and Average S0 = 0. This occurred because the temporal spacing between successive (one or several) opacity measurements were greater than 15 seconds. During this particular run the lidar's laser was being manually fired (laser usually is fired automatically) and the operator missed activating the laser at the proper time. This can also occur when, in accordance with §2.2.3 of Alternate Method 1, lidar operation is temporarily suspended to obtain another reference measurement. An example of this effect is seen on page 1 of fourth data run (Stack 1). Seven consecutive values of "Average Opacity" and "Average S0" were zero. During the applicable 6-minute time interval the lidar operation was suspended from 07:45:38 to 07:47:11; i.e., 1 minute, 33 seconds. The computer software places zero for the two average parameters rather than performing the running-average with opacity values of zero for the missing data.

The computer graphical plots, located in Section IV immediately after each respective tabular data set, show the individual opacity values (column 3 of the tabular data set) along with their respective standard deviations as error bars (column 4 of the tabular data set). The standard deviation gives an indication of the magnitude of the error associated with

each opacity value due to atmospheric noise along the lidar line-of-sight. The magnitude of the average opacity established in the SIP is indicated on each plot by the dashed line at the 30% value. Each graphical plot is fixed in time along the horizontal axis, being 10 minutes in length.

The lidar internal calibration data are presented in Table 1 of Section II for each respective observation period as the extreme values that occurred throughout the opacity range given above. A negative value indicates that the lidar was determining opacity low or below the respective standard while a positive value indicates a high value with respect to the standard.

IV. DATA ANALYSIS PRESENTATION

OMEGA-0044
CENTRAL ILLINOIS LIGHT COMPANY
EDWARDS STATION
Stack 1
June 3, 1980, 18:46:38 to 19:16:49

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OMEGA-0044, STACK 1, CILCO EDWARDS STATION, BARTONVILLE, IL FROM RT 9 & 24 SIX MINUTE AVERAGES
DATE TIME OPACITY SO VIOLATION AVERAGE OPACITY AVERAGE SO VIOLATION NUMBER DISCARDED

6/ 3/80	18 46 38	77	2		0	0		0 OF 0
6/ 3/80	18 47 10	79	1		0	0		0 OF 0
6/ 3/80	18 47 20	75	2		0	0		0 OF 0
6/ 3/80	18 47 31	79	1		0	0		0 OF 0
6/ 3/80	18 47 42	78	2		0	0		0 OF 0
6/ 3/80	18 47 52	78	2		0	0		0 OF 0
6/ 3/80	18 48 2	78	2		0	0		0 OF 0
6/ 3/80	18 48 12	80	2		0	0		0 OF 0
6/ 3/80	18 48 21	81	1		0	0		0 OF 0
6/ 3/80	18 48 31	81	2		0	0		0 OF 0
6/ 3/80	18 48 40	80	3		0	0		0 OF 0
6/ 3/80	18 48 50	79	1		0	0		0 OF 0
6/ 3/80	18 49 0	79	1		0	0		0 OF 0
6/ 3/80	18 49 10	79	1		0	0		0 OF 0
6/ 3/80	18 49 20	79	2		0	0		0 OF 0
6/ 3/80	18 49 30	79	2		0	0		0 OF 0
6/ 3/80	18 49 40	76	1		0	0		0 OF 0
6/ 3/80	18 49 50	79	2		0	0		0 OF 0
6/ 3/80	18 50 0	79	2		0	0		0 OF 0
6/ 3/80	18 50 10	79	2		0	0		0 OF 0
6/ 3/80	18 50 20	74	3		0	0		0 OF 0
6/ 3/80	18 50 30	78	1		0	0		0 OF 0
6/ 3/80	18 50 40	78	2		0	0		0 OF 0
6/ 3/80	18 50 50	78	0		0	0		0 OF 0
6/ 3/80	18 51 0	78	2		0	0		0 OF 0
6/ 3/80	18 51 9	79	3		0	0		0 OF 0
6/ 3/80	18 51 19	79	0		0	0		0 OF 0
6/ 3/80	18 51 29	80	1		0	0		0 OF 0
6/ 3/80	18 51 39	80	2		0	0		0 OF 0
6/ 3/80	18 51 49	81	0		0	0		0 OF 0
6/ 3/80	18 51 59	81	2		0	0		0 OF 0
6/ 3/80	18 52 9	79	0		0	0		0 OF 0
6/ 3/80	18 52 19	81	2		79	2	****	0 OF 33
6/ 3/80	18 52 29	78	2		79	2	****	0 OF 34
6/ 3/80	18 52 39	78	1		0	0		0 OF 0
6/ 3/80	18 52 49	77	2		0	0		0 OF 0
6/ 3/80	18 52 59	81	2		79	2	****	0 OF 36
6/ 3/80	18 53 9	79	2		79	2	****	0 OF 37
6/ 3/80	18 53 19	80	3		79	2	****	0 OF 37
6/ 3/80	18 53 28	78	1		79	2	****	0 OF 37
6/ 3/80	18 53 38	77	1		79	2	****	0 OF 37
6/ 3/80	18 53 48	82	1		79	2	****	0 OF 37
6/ 3/80	18 53 58	80	3		79	2	****	0 OF 37
6/ 3/80	18 54 8	79	2		79	2	****	0 OF 37
6/ 3/80	18 54 18	81	2		79	2	****	0 OF 37
6/ 3/80	18 54 28	77	2		79	2	****	0 OF 37
6/ 3/80	18 54 38	80	2		79	2	****	0 OF 37
6/ 3/80	18 54 48	80	2		79	2	****	0 OF 37
6/ 3/80	18 54 58	81	0		79	2	****	0 OF 37
6/ 3/80	18 55 8	80	2		79	2	****	0 OF 37

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OMEGA-0044, STACK 1, CILCO EDWARDS STATION, BARTONVILLE, IL FROM RT 9 & 24 SIX MINUTE AVERAGES
DATE TIME OPACITY SO VIOLATION AVERAGE OPACITY AVERAGE SO VIOLATION NUMBER DISCARDED

6/ 3/80	18 55 18	78	2		79	2	****	0 OF 37
6/ 3/80	18 55 27	80	2		79	2	****	0 OF 37
6/ 3/80	18 55:37	81	1		79	2	****	0 OF 37
6/ 3/80	18 55 47	81	0		79	2	****	0 OF 37
6/ 3/80	18 55 57	81	0		79	2	****	0 OF 37
6/ 3/80	18 56 7	80	2		79	2	****	0 OF 37
6/ 3/80	18 56 17	80	1		79	2	****	0 OF 37
6/ 3/80	18 56 27	81	2		80	2	****	0 OF 37
6/ 3/80	18 56 37	83	1		80	2	****	0 OF 37
6/ 3/80	18 56 47	83	2		80	2	****	0 OF 37
6/ 3/80	18 56 57	80	2		80	2	****	0 OF 37
6/ 3/80	18 57 7	79	2		80	2	****	0 OF 37
6/ 3/80	18 57 17	81	2		80	2	****	0 OF 37
6/ 3/80	18 57 28	79	2		80	2	****	0 OF 37
6/ 3/80	18 57 38	79	2		80	2	****	0 OF 37
6/ 3/80	18 57 48	80	0		80	2	****	0 OF 37
6/ 3/80	18 57 59	80	2		80	2	****	0 OF 37
6/ 3/80	18 58 9	79	2		80	2	****	0 OF 37
6/ 3/80	18 58 19	79	2		80	2	****	0 OF 37
6/ 3/80	18 58 29	80	1		80	2	****	0 OF 37
6/ 3/80	18 58 40	79	2		80	2	****	0 OF 36
6/ 3/80	18 58 50	77	2		80	2	****	0 OF 36
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6/ 3/80	18 59 20	79	1		80	2	****	0 OF 36
6/ 3/80	18 59 31	76	2		80	2	****	0 OF 36
6/ 3/80	18 59 41	81	1		80	2	****	0 OF 36
6/ 3/80	18 59 51	79	2		80	2	****	0 OF 36
6/ 3/80	19 0 2	77	2		80	2	****	0 OF 36
6/ 3/80	19 0 12	77	2		80	2	****	0 OF 36
6/ 3/80	19 0 22	79	2		80	2	****	0 OF 36
6/ 3/80	19 0 33	80	2		80	2	****	0 OF 36
6/ 3/80	19 0 43	77	3		80	2	****	0 OF 36
6/ 3/80	19 0 53	76	2		79	2	****	0 OF 36
6/ 3/80	19 1 3	77	1		79	2	****	0 OF 36
6/ 3/80	19 1 14	78	1		79	2	****	0 OF 36
6/ 3/80	19 1 24	74	2		79	2	****	0 OF 36
6/ 3/80	19 1 34	75	2		79	2	****	0 OF 36
6/ 3/80	19 1 44	80	1		79	2	****	0 OF 36
6/ 3/80	19 1 55	79	2		79	2	****	0 OF 36
6/ 3/80	19 2 5	79	1		79	2	****	0 OF 36
6/ 3/80	19 2 15	77	0		79	2	****	0 OF 36
6/ 3/80	19 2 26	76	2		79	2	****	0 OF 36
6/ 3/80	19 2 36	76	1		79	2	****	0 OF 36
6/ 3/80	19 2 46	80	2		78	2	****	0 OF 36
6/ 3/80	19 2 57	78	2		78	2	****	0 OF 36
6/ 3/80	19 3 7	80	1		78	2	****	0 OF 36
6/ 3/80	19 3 17	78	2		78	2	****	0 OF 36
6/ 3/80	19 3 27	78	2		78	2	****	0 OF 36
6/ 3/80	19 3 37	79	2		78	2	****	0 OF 36

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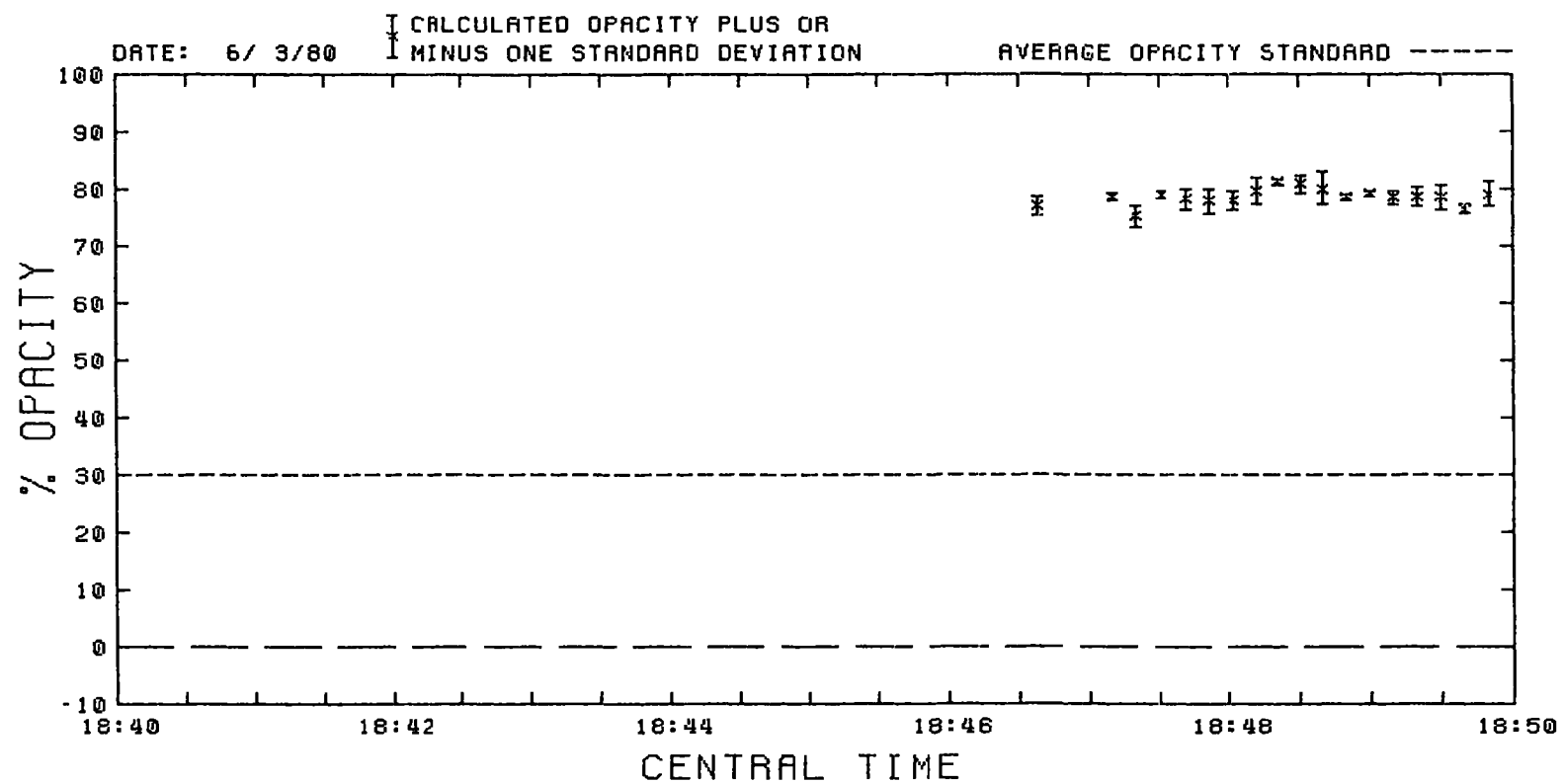
OMEGA-0044, STACK 1, CILCO EDWARDS STATION, BARTONVILLE, IL FROM RT 9 & 24 SIX MINUTE AVERAGES
DATE TIME OPACITY SO VIOLATION AVERAGE OPACITY AVERAGE SO VIOLATION NUMBER DISCARDED

6/ 3/80	19 3 46	82	3		78	2	****	0 OF 36
6/ 3/80	19 3 56	79	0		78	2	****	0 OF 36
6/ 3/80	19 4 5	79	1		78	2	****	0 OF 36
6/ 3/80	19 4 14	79	2		78	2	****	0 OF 36
6/ 3/80	19 4 23	77	3		78	2	****	0 OF 36
6/ 3/80	19 4 32	75	2		78	2	****	0 OF 36
6/ 3/80	19 4 41	77	2		78	2	****	0 OF 36
6/ 3/80	19 4 50	77	2		78	2	****	0 OF 37
6/ 3/80	19 5 0	75	2		78	2	****	0 OF 37
6/ 3/80	19 5 9	77	2		78	2	****	0 OF 37
6/ 3/80	19 5 19	78	2		78	2	****	0 OF 37
6/ 3/80	19 5 29	75	2		78	2	****	0 OF 37
6/ 3/80	19 5 38	74	2		78	2	****	0 OF 37
6/ 3/80	19 5 48	80	2		78	2	****	0 OF 37
6/ 3/80	19 5 58	77	2		78	2	****	0 OF 37
6/ 3/80	19 6 9	79	0		78	2	****	0 OF 37
6/ 3/80	19 6 19	80	2		78	2	****	0 OF 37
6/ 3/80	19 6 29	79	1		78	2	****	0 OF 37
6/ 3/80	19 6 39	80	1		78	2	****	0 OF 37
6/ 3/80	19 6 49	79	1		78	2	****	0 OF 37
6/ 3/80	19 6 59	79	1		78	2	****	0 OF 37
6/ 3/80	19 7 10	79	0		78	2	****	0 OF 37
6/ 3/80	19 7 20	79	0		78	2	****	0 OF 37
6/ 3/80	19 7 30	79	2		78	2	****	0 OF 37
6/ 3/80	19 7 40	80	2		78	2	****	0 OF 37
6/ 3/80	19 7 50	81	1		78	2	****	0 OF 37
6/ 3/80	19 8 0	78	1		78	2	****	0 OF 37
6/ 3/80	19 8 10	78	1		78	2	****	0 OF 37
6/ 3/80	19 8 21	80	0		78	2	****	0 OF 37
6/ 3/80	19 8 31	79	2		78	2	****	0 OF 37
6/ 3/80	19 8 41	79	1		78	2	****	0 OF 37
6/ 3/80	19 8 51	74	1		78	2	****	0 OF 37
6/ 3/80	19 9 1	77	2		78	2	****	0 OF 37
6/ 3/80	19 9 12	80	1		78	2	****	0 OF 37
6/ 3/80	19 9 22	79	1		78	1	****	0 OF 37
6/ 3/80	19 9 32	79	2		78	1	****	0 OF 37
6/ 3/80	19 9 41	80	0		78	1	****	0 OF 37
6/ 3/80	19 9 50	78	2		78	1	****	0 OF 37
6/ 3/80	19 10 0	80	1		78	1	****	0 OF 37
6/ 3/80	19 10 9	80	1		78	1	****	0 OF 37
6/ 3/80	19 10 18	79	1		78	1	****	0 OF 37
6/ 3/80	19 10 27	78	2		78	1	****	0 OF 37
6/ 3/80	19 10 36	79	1		78	1	****	0 OF 37
6/ 3/80	19 10 46	77	2		78	1	****	0 OF 37
6/ 3/80	19 10 56	81	1		78	1	****	0 OF 37
6/ 3/80	19 11 6	78	0		79	1	****	0 OF 37
6/ 3/80	19 11 16	82	0		79	1	****	0 OF 37
6/ 3/80	19 11 27	79	1		79	1	****	0 OF 37
6/ 3/80	19 11 37	78	1		79	1	****	0 OF 37
6/ 3/80	19 11 48	79	0		79	1	****	0 OF 37

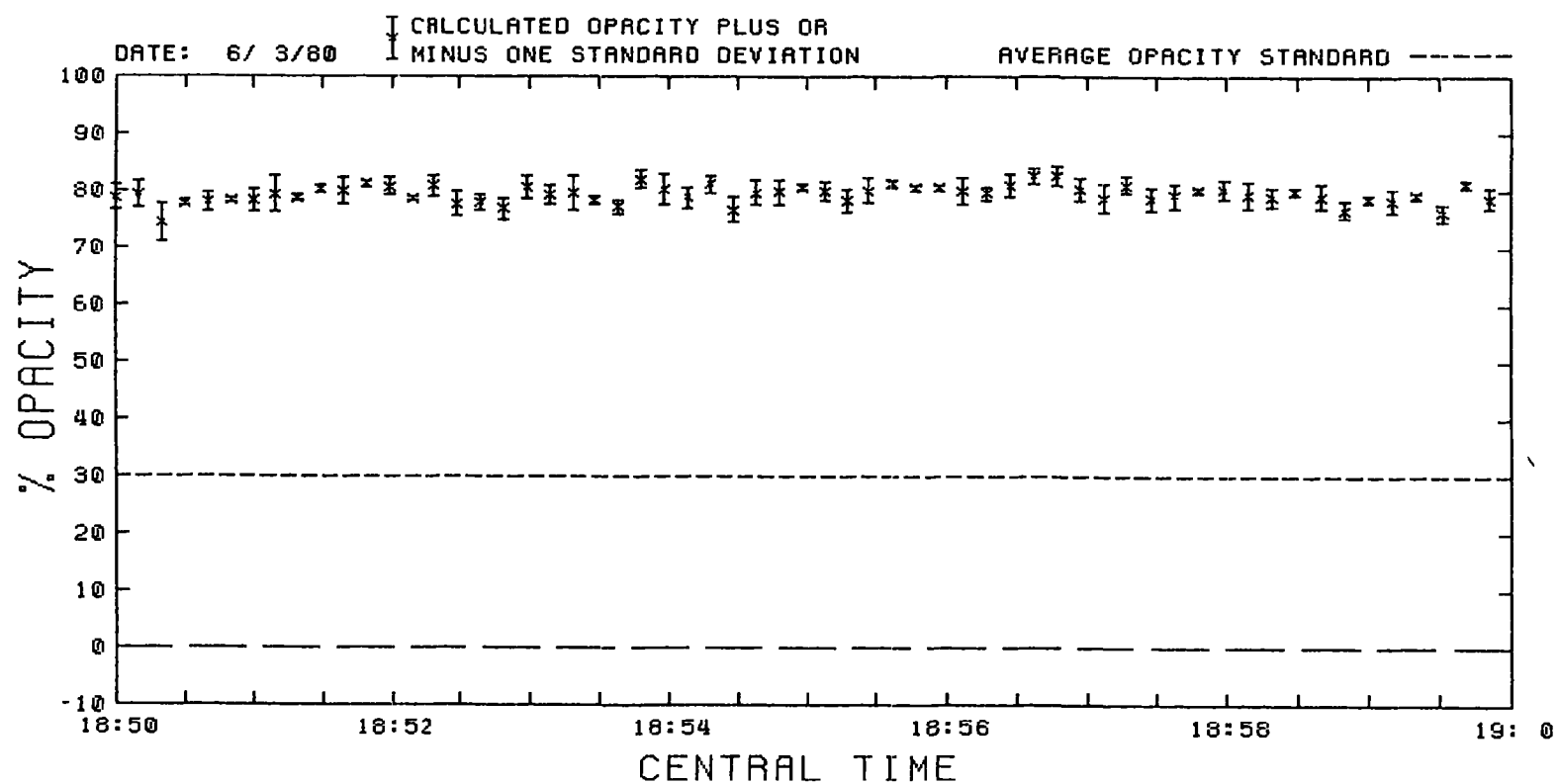
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OMEGA-0044, STACK 1, CILCO EDWARDS STATION, BARTONVILLE, IL FROM RT 9 & 24 SIX MINUTE AVERAGES

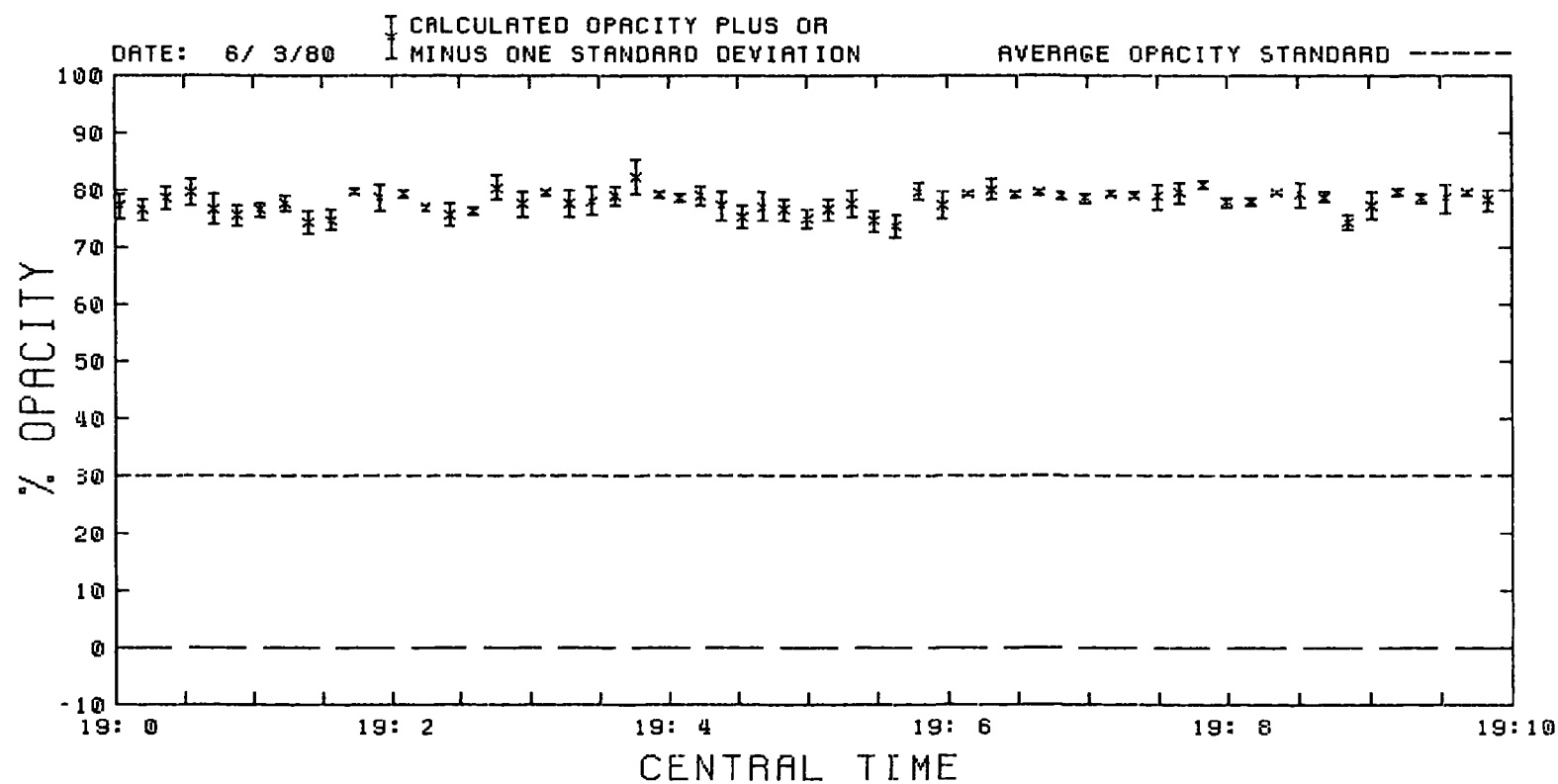
DATE	TIME	OPACITY	SO VIOLATION	AVERAGE OPACITY	AVERAGE SO VIOLATION	NUMBER DISCARDED
6/ 3/80	19 11 58	79	2	79	1	**** 0 OF 37
6/ 3/80	19 12 9	77	2	79	1	**** 0 OF 37
6/ 3/80	19 12 20	78	1	79	1	**** 0 OF 36
6/ 3/80	19 12 30	78	2	79	1	**** 0 OF 36
6/ 3/80	19 12 40	81	2	79	1	**** 0 OF 36
6/ 3/80	19 12 50	80	1	79	1	**** 0 OF 36
6/ 3/80	19 13 0	79	2	79	1	**** 0 OF 36
6/ 3/80	19 13 10	77	2	79	1	**** 0 OF 37
6/ 3/80	19 13 20	79	0	79	1	**** 0 OF 37
6/ 3/80	19 13 30	78	2	79	1	**** 0 OF 37
6/ 3/80	19 13 40	79	0	79	1	**** 0 OF 37
6/ 3/80	19 13 50	78	2	79	1	**** 0 OF 37
6/ 3/80	19 14 0	78	0	79	1	**** 0 OF 37
6/ 3/80	19 14 10	78	1	79	1	**** 0 OF 37
6/ 3/80	19 14 20	79	0	79	1	**** 0 OF 37
6/ 3/80	19 14 30	79	2	79	1	**** 0 OF 37
6/ 3/80	19 14 40	78	2	79	1	**** 0 OF 37
6/ 3/80	19 14 49	77	2	79	1	**** 0 OF 37
6/ 3/80	19 14 59	78	2	79	1	**** 0 OF 37
6/ 3/80	19 15 9	78	2	79	1	**** 0 OF 37
6/ 3/80	19 15 19	79	0	79	1	**** 0 OF 37
6/ 3/80	19 15 29	79	1	79	1	**** 0 OF 37
6/ 3/80	19 15 39	80	1	79	1	**** 0 OF 37
6/ 3/80	19 15 49	79	1	79	1	**** 0 OF 37
6/ 3/80	19 15 59	78	1	79	1	**** 0 OF 37
6/ 3/80	19 16 9	78	0	79	1	**** 0 OF 37
6/ 3/80	19 16 19	76	3	79	1	**** 0 OF 36
6/ 3/80	19 16 29	76	2	79	1	**** 0 OF 36
6/ 3/80	19 16 39	79	1	79	1	**** 0 OF 36
6/ 3/80	19 16 49	79	1	79	1	**** 0 OF 36



STACK 1, CILCO EDWARDS STATION, BARTONVILLE, IL.



STACK 1, CILCO EDWARDS STATION, BARTONVILLE, IL.



STACK 1, CILCO EDWARDS STATION, BARTONVILLE, IL.

OMEGA-0044
CENTRAL ILLINOIS LIGHT COMPANY
EDWARDS STATION
Stack 1
June 3, 1980, 19:22:49 to 19:52:36

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ENFORCEMENT INVESTIGATIONS CENTER
DENVER, COLORADO 80225

OMEGA-0044, STACK 1, CILCO EDWARDS STATION, BARTONVILLE, IL FROM RT 9 & 24 SIX MINUTE AVERAGES

DATE	TIME	OPACITY	SO VIOLATION	AVERAGE OPACITY	AVERAGE SO VIOLATION	NUMBER DISCARDED
6/ 3/80	19 22 49	80	2	0	0	0 OF 0
6/ 3/80	19 22 58	81	2	0	0	0 OF 0
6/ 3/80	19 23 8	78	2	0	0	0 OF 0
6/ 3/80	19 23 18	82	1	0	0	0 OF 0
6/ 3/80	19 23 28	80	2	0	0	0 OF 0
6/ 3/80	19 23 38	79	0	0	0	0 OF 0
6/ 3/80	19 23 48	80	2	0	0	0 OF 0
6/ 3/80	19 23 58	77	2	0	0	0 OF 0
6/ 3/80	19 24 8	81	1	0	0	0 OF 0
6/ 3/80	19 24 18	81	2	0	0	0 OF 0
6/ 3/80	19 24 28	79	2	0	0	0 OF 0
6/ 3/80	19 24 38	80	2	0	0	0 OF 0
6/ 3/80	19 24 48	79	1	0	0	0 OF 0
6/ 3/80	19 24 58	80	2	0	0	0 OF 0
6/ 3/80	19 25 8	78	1	0	0	0 OF 0
6/ 3/80	19 25 18	80	2	0	0	0 OF 0
6/ 3/80	19 25 28	79	1	0	0	0 OF 0
6/ 3/80	19 25 38	80	0	0	0	0 OF 0
6/ 3/80	19 25 48	82	3	0	0	0 OF 0
6/ 3/80	19 25 58	81	2	0	0	0 OF 0
6/ 3/80	19 26 8	81	2	0	0	0 OF 0
6/ 3/80	19 26 18	81	1	0	0	0 OF 0
6/ 3/80	19 26 28	81	1	0	0	0 OF 0
6/ 3/80	19 26 38	82	2	0	0	0 OF 0
6/ 3/80	19 26 48	81	1	0	0	0 OF 0
6/ 3/80	19 26 59	83	2	0	0	0 OF 0
6/ 3/80	19 27 9	80	1	0	0	0 OF 0
6/ 3/80	19 27 19	80	2	0	0	0 OF 0
6/ 3/80	19 27 29	80	1	0	0	0 OF 0
6/ 3/80	19 27 39	81	1	0	0	0 OF 0
6/ 3/80	19 27 49	81	2	0	0	0 OF 0
6/ 3/80	19 27 59	80	1	0	0	0 OF 0
6/ 3/80	19 28 9	82	1	0	0	0 OF 0
6/ 3/80	19 28 19	81	1	0	0	0 OF 0
6/ 3/80	19 28 29	82	1	0	0	0 OF 0
6/ 3/80	19 28 39	82	0	80	1	0 OF 36
6/ 3/80	19 28 49	83	2	81	1	0 OF 37
6/ 3/80	19 29 0	79	2	80	1	0 OF 36
6/ 3/80	19 29 10	78	3	80	2	0 OF 36
6/ 3/80	19 29 20	79	1	80	1	0 OF 36
6/ 3/80	19 29 30	78	2	80	1	0 OF 36
6/ 3/80	19 29 40	81	2	80	2	0 OF 36
6/ 3/80	19 29 50	80	2	80	2	0 OF 36
6/ 3/80	19 30 0	80	2	80	2	0 OF 36
6/ 3/80	19 30 10	79	1	80	2	0 OF 36
6/ 3/80	19 30 20	78	1	80	1	0 OF 36
6/ 3/80	19 30 30	80	2	80	2	0 OF 36
6/ 3/80	19 30 40	80	2	80	2	0 OF 36
6/ 3/80	19 30 50	81	1	80	2	0 OF 36
6/ 3/80	19 31 0	81	1	80	2	0 OF 36

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ENFORCEMENT INVESTIGATIONS CENTER
DENVER, COLORADO 80225

OMEGA-0044, STACK 1, CILCO EDWARDS STATION, BARTONVILLE, IL FROM RT 9 & 24 SIX MINUTE AVERAGES
DATE TIME OPACITY SO VIOLATION AVERAGE OPACITY AVERAGE SO VIOLATION NUMBER DISCARDED

6/ 3/80	19 31.10	80	2		80	2	****	0 OF 36
6/ 3/80	19 31 20	80	1		80	2	****	0 OF 36
6/ 3/80	19 31 30	80	2		80	2	****	0 OF 36
6/ 3/80	19 31 41	79	3		80	2	****	0 OF 36
6/ 3/80	19 31 51	80	1		80	2	****	0 OF 36
6/ 3/80	19 32 1	79	1		80	2	****	0 OF 36
6/ 3/80	19 32 11	79	2		80	2	****	0 OF 36
6/ 3/80	19 32 21	81	1		80	2	****	0 OF 36
6/ 3/80	19 32 31	82	2		80	2	****	0 OF 36
6/ 3/80	19 32 41	81	2		80	2	****	0 OF 36
6/ 3/80	19 32 51	82	2		80	2	****	0 OF 36
6/ 3/80	19 33 1	82	2		80	2	****	0 OF 36
6/ 3/80	19 33 11	80	1		80	2	****	0 OF 36
6/ 3/80	19 33 20	79	1		80	2	****	0 OF 36
6/ 3/80	19 33 30	80	2		80	2	****	0 OF 36
6/ 3/80	19 33 39	75	1		80	2	****	0 OF 37
6/ 3/80	19 33 49	76	2		80	2	****	0 OF 37
6/ 3/80	19 33 59	81	2		80	2	****	0 OF 37
6/ 3/80	19 34 8	81	2		80	2	****	0 OF 37
6/ 3/80	19 34 18	79	2		80	2	****	0 OF 37
6/ 3/80	19 34 28	79	1		80	2	****	0 OF 37
6/ 3/80	19 34 38	80	2		80	2	****	0 OF 37
6/ 3/80	19 34 48	80	2		80	2	****	0 OF 37
6/ 3/80	19 34 58	80	1		80	2	****	0 OF 37
6/ 3/80	19 35 6	78	2		80	2	****	0 OF 37
6/ 3/80	19 35 16	80	2		80	2	****	0 OF 37
6/ 3/80	19 35 26	81	1		80	2	****	0 OF 37
6/ 3/80	19 35 35	79	2		80	2	****	0 OF 37
6/ 3/80	19 35 45	80	1		80	2	****	0 OF 37
6/ 3/80	19 35 55	78	3		80	2	****	0 OF 37
6/ 3/80	19 36 6	80	2		80	2	****	0 OF 37
6/ 3/80	19 36 16	82	1		80	2	****	0 OF 37
6/ 3/80	19 36 26	82	2		80	2	****	0 OF 37
6/ 3/80	19 36 37	81	1		80	2	****	0 OF 37
6/ 3/80	19 36 48	78	2		80	2	****	0 OF 37
6/ 3/80	19 36 59	80	1		80	2	****	0 OF 37
6/ 3/80	19 37 9	79	2		80	2	****	0 OF 37
6/ 3/80	19 37 20	79	0		80	2	****	0 OF 37
6/ 3/80	19 37 30	79	1		80	2	****	0 OF 37
6/ 3/80	19 37 40	81	1		80	2	****	0 OF 37
6/ 3/80	19 37 50	81	2		80	2	****	0 OF 37
6/ 3/80	19 38 1	77	2		80	2	****	0 OF 37
6/ 3/80	19 38 11	81	2		80	2	****	0 OF 37
6/ 3/80	19 38 21	80	2		80	2	****	0 OF 37
6/ 3/80	19 38 31	79	0		80	2	****	0 OF 37
6/ 3/80	19 38 40	81	2		80	2	****	0 OF 37
6/ 3/80	19 38 50	81	1		80	2	****	0 OF 37
6/ 3/80	19 39 0	83	2		80	2	****	0 OF 37
6/ 3/80	19 39 10	78	2		80	2	****	0 OF 37
6/ 3/80	19 39 20	78	2		80	2	****	0 OF 37

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ENFORCEMENT INVESTIGATIONS CENTER
DENVER, COLORADO 80225

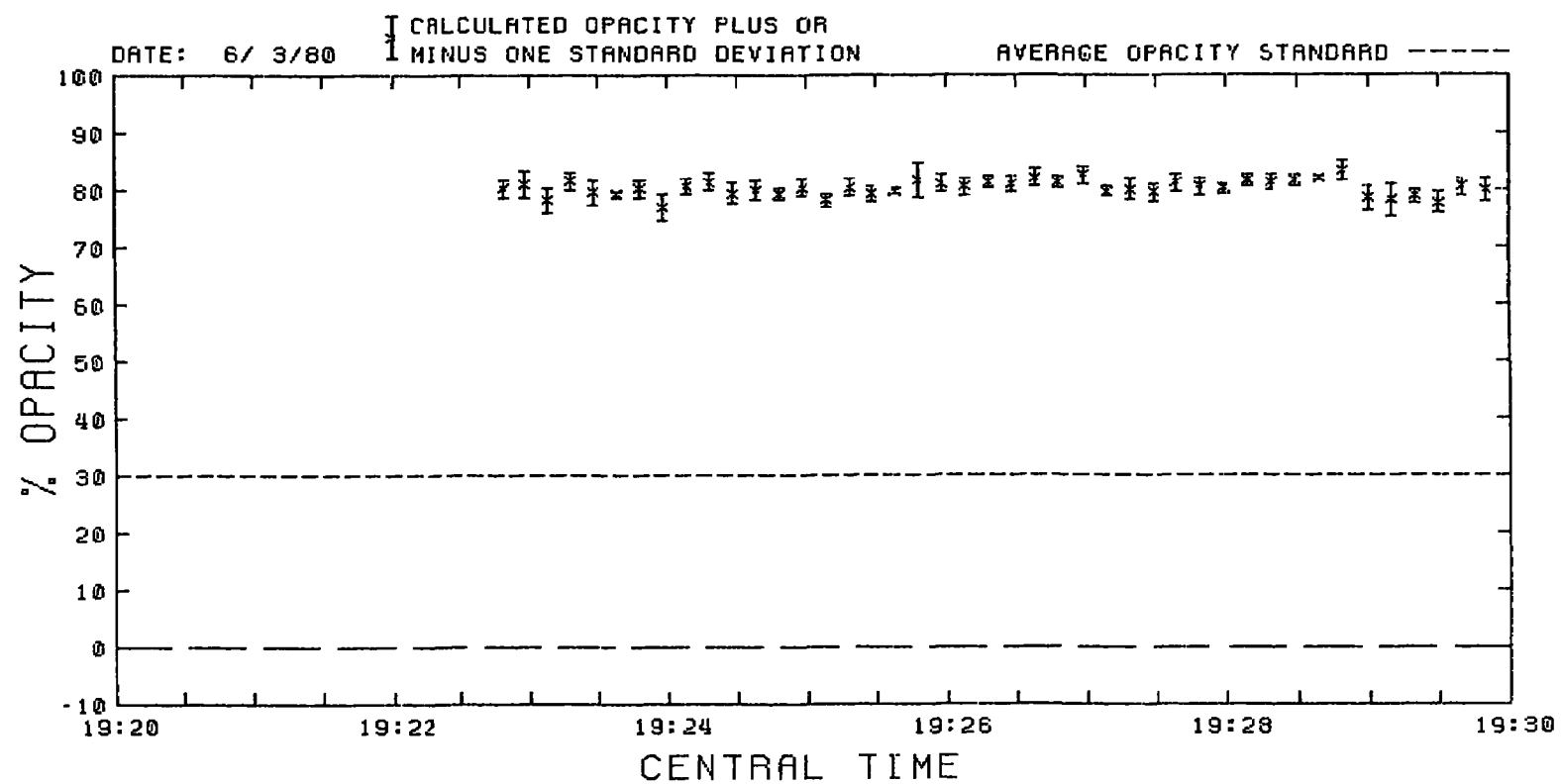
OMEGA-0044, STACK 1, CILCO EDWARDS STATION, BARTONVILLE, IL FROM RT 9 & 24 SIX MINUTE AVERAGES
DATE TIME OPACITY SO VIOLATION AVERAGE OPACITY AVERAGE SO VIOLATION NUMBER DISCARDED

6/ 3/80	19 39 30	79	2		80	2	****	0 OF 37
6/ 3/80	19 39 40	78	3		80	2	****	0 OF 36
6/ 3/80	19 39 50	79	2		80	2	****	0 OF 36
6/ 3/80	19 40 0	80	3		80	2	****	0 OF 36
6/ 3/80	19 40 10	81	1		80	2	****	0 OF 36
6/ 3/80	19 40 20	79	2		80	2	****	0 OF 36
6/ 3/80	19 40 30	80	2		80	2	****	0 OF 36
6/ 3/80	19 40 40	81	2		80	2	****	0 OF 36
6/ 3/80	19 40 50	79	2		80	2	****	0 OF 36
6/ 3/80	19 40 59	79	1		80	2	****	0 OF 36
6/ 3/80	19 41 9	82	1		80	2	****	0 OF 36
6/ 3/80	19 41 19	79	1		80	2	****	0 OF 36
6/ 3/80	19 41 29	81	1		80	2	****	0 OF 36
6/ 3/80	19 41 39	82	2		80	2	****	0 OF 36
6/ 3/80	19 41 49	79	1		80	2	****	0 OF 36
6/ 3/80	19 41 59	83	2		80	2	****	0 OF 36
6/ 3/80	19 42 9	80	2		80	2	****	0 OF 36
6/ 3/80	19 42 19	81	2		80	2	****	0 OF 36
6/ 3/80	19 42 29	82	2		80	2	****	0 OF 36
6/ 3/80	19 42 39	83	3		80	2	****	0 OF 36
6/ 3/80	19 42 49	81	1		80	2	****	0 OF 36
6/ 3/80	19 42 59	79	1		80	2	****	0 OF 37
6/ 3/80	19 43 10	80	1		80	2	****	0 OF 36
6/ 3/80	19 43 20	82	2		80	2	****	0 OF 37
6/ 3/80	19 43 30	80	1		80	2	****	0 OF 37
6/ 3/80	19 43 40	81	1		80	2	****	0 OF 37
6/ 3/80	19 43 50	79	3		80	2	****	0 OF 37
6/ 3/80	19 44 0	80	2		80	2	****	0 OF 37
6/ 3/80	19 44 10	80	2		80	2	****	0 OF 37
6/ 3/80	19 44 20	80	2		80	2	****	0 OF 37
6/ 3/80	19 44 30	81	2		80	2	****	0 OF 37
6/ 3/80	19 44 41	81	2		80	2	****	0 OF 36
6/ 3/80	19 44 51	81	2		80	2	****	0 OF 36
6/ 3/80	19 45 1	80	1		80	2	****	0 OF 36
6/ 3/80	19 45 11	80	2		80	2	****	0 OF 36
6/ 3/80	19 45 20	82	1		80	2	****	0 OF 37
6/ 3/80	19 45 30	79	2		80	2	****	0 OF 37
6/ 3/80	19 45 40	81	2		80	2	****	0 OF 37
6/ 3/80	19 45 49	80	1		80	2	****	0 OF 37
6/ 3/80	19 45 59	82	1		81	2	****	0 OF 37
6/ 3/80	19 46 9	80	2		81	2	****	0 OF 37
6/ 3/80	19 46 19	80	1		81	2	****	0 OF 37
6/ 3/80	19 46 29	79	3		81	2	****	0 OF 37
6/ 3/80	19 46 39	79	1		81	2	****	0 OF 37
6/ 3/80	19 46 49	82	2		81	2	****	0 OF 37
6/ 3/80	19 47 0	81	2		81	2	****	0 OF 36
6/ 3/80	19 47 10	80	2		81	2	****	0 OF 36
6/ 3/80	19 47 20	80	1		81	2	****	0 OF 36
6/ 3/80	19 47 30	81	2		81	2	****	0 OF 36
6/ 3/80	19 47 40	82	2		81	2	****	0 OF 36

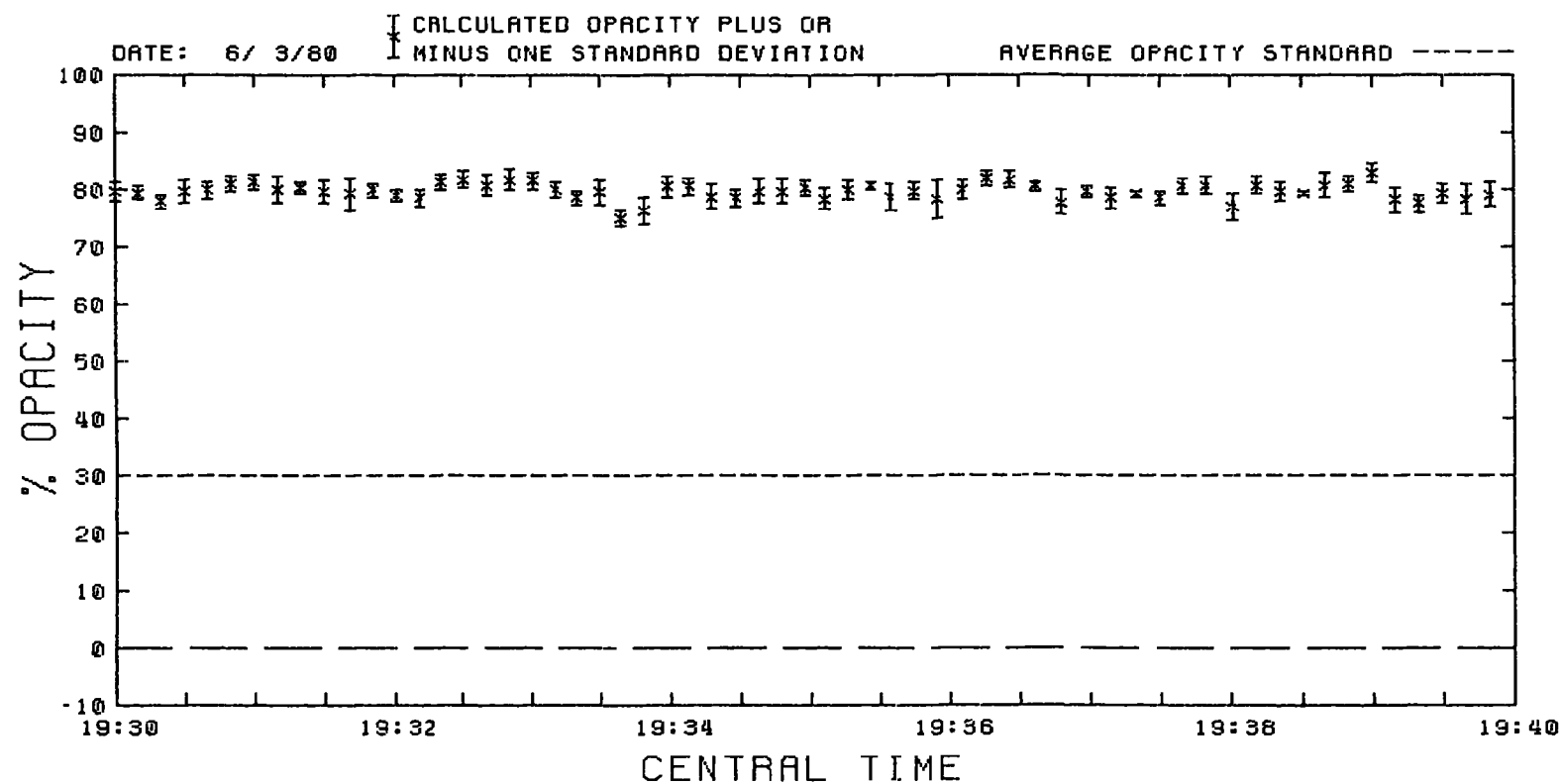
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ENFORCEMENT INVESTIGATIONS CENTER
DENVER, COLORADO 80225

OMEGA-0044, STACK 1, CILCO EDWARDS STATION, BARTONVILLE, IL FROM RT 9 & 24 SIX MINUTE AVERAGES
DATE TIME OPACITY SO VIOLATION AVERAGE OPACITY AVERAGE SO VIOLATION NUMBER DISCARDED

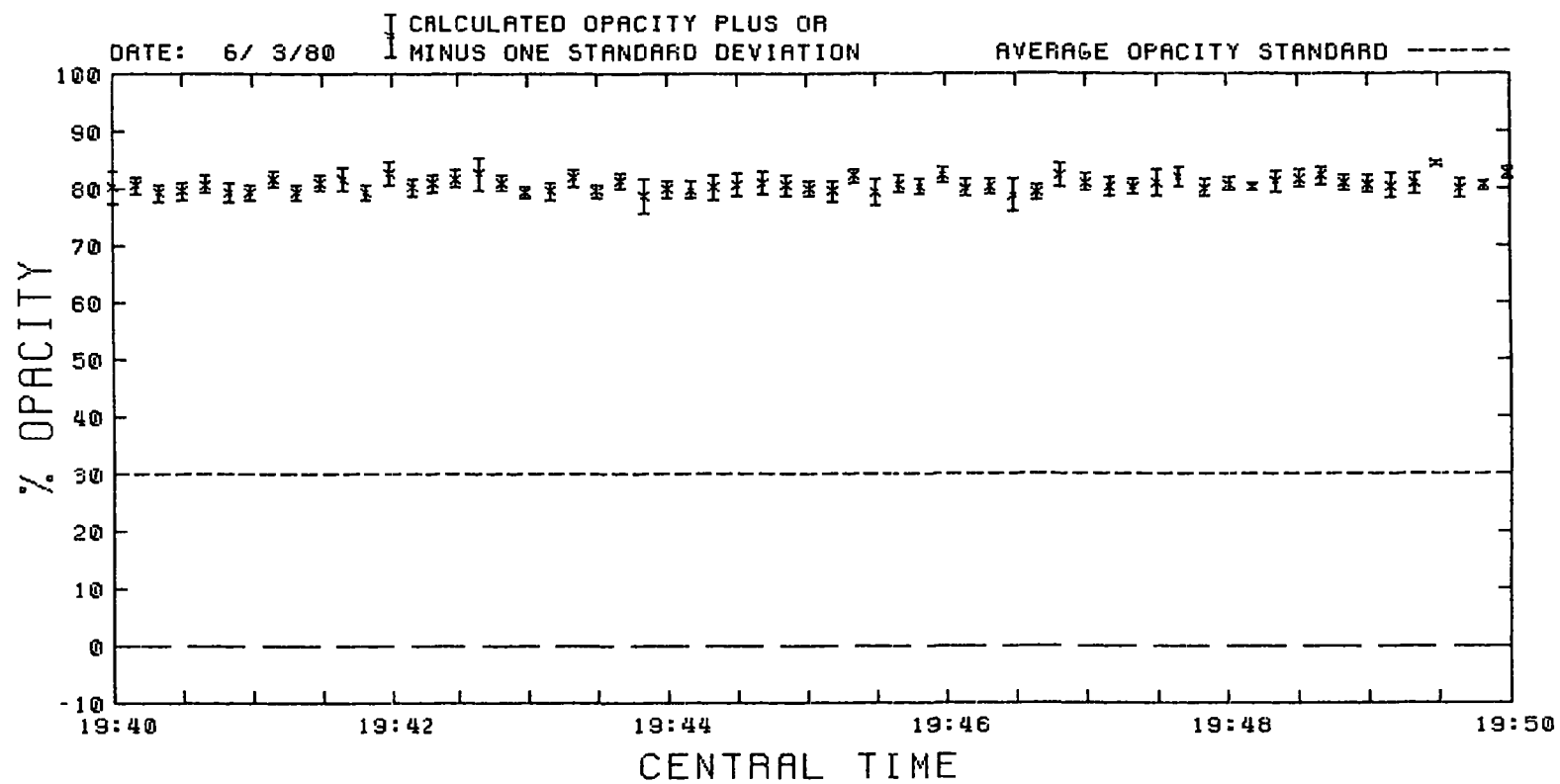
6/ 3/80	19 47 51	80	2		81	2	****	0 OF 36
6/ 3/80	19 48 1	81	1		81	2	****	0 OF 36
6/ 3/80	19 48 11	80	1		81	2	****	0 OF 36
6/ 3/80	19 48 21	81	2		81	2	****	0 OF 36
6/ 3/80	19 48 31	82	1		81	2	****	0 OF 36
6/ 3/80	19 48 40	82	2		81	2	****	0 OF 36
6/ 3/80	19 48 50	81	1		81	2	****	0 OF 36
6/ 3/80	19 49 0	81	2		81	2	****	0 OF 36
6/ 3/80	19 49 10	80	2		81	2	****	0 OF 37
6/ 3/80	19 49 20	81	2		81	2	****	0 OF 37
6/ 3/80	19 49 29	84	0		81	2	****	0 OF 37
6/ 3/80	19 49 39	80	2		81	2	****	0 OF 37
6/ 3/80	19 49 49	81	1		81	2	****	0 OF 37
6/ 3/80	19 49 59	83	1		81	2	****	0 OF 37
6/ 3/80	19 50 8	83	2		81	2	****	0 OF 37
6/ 3/80	19 50 18	82	2		81	2	****	0 OF 37
6/ 3/80	19 50 28	79	3		81	2	****	0 OF 37
6/ 3/80	19 50 38	82	2		81	2	****	0 OF 37
6/ 3/80	19 50 47	82	3		81	2	****	0 OF 37
6/ 3/80	19 50 57	81	2		81	2	****	0 OF 37
6/ 3/80	19 51 7	81	1		81	2	****	0 OF 37
6/ 3/80	19 51 17	82	2		81	2	****	0 OF 37
6/ 3/80	19 51 26	81	1		81	2	****	0 OF 37
6/ 3/80	19 51 36	82	2		81	2	****	0 OF 37
6/ 3/80	19 51 46	81	0		81	2	****	0 OF 37
6/ 3/80	19 51 56	81	2		81	2	****	0 OF 37
6/ 3/80	19 52 6	82	2		81	2	****	0 OF 37
6/ 3/80	19 52 16	81	1		81	2	****	0 OF 37
6/ 3/80	19 52 26	78	2		81	2	****	0 OF 37
6/ 3/80	19 52 36	83	2		81	2	****	0 OF 37



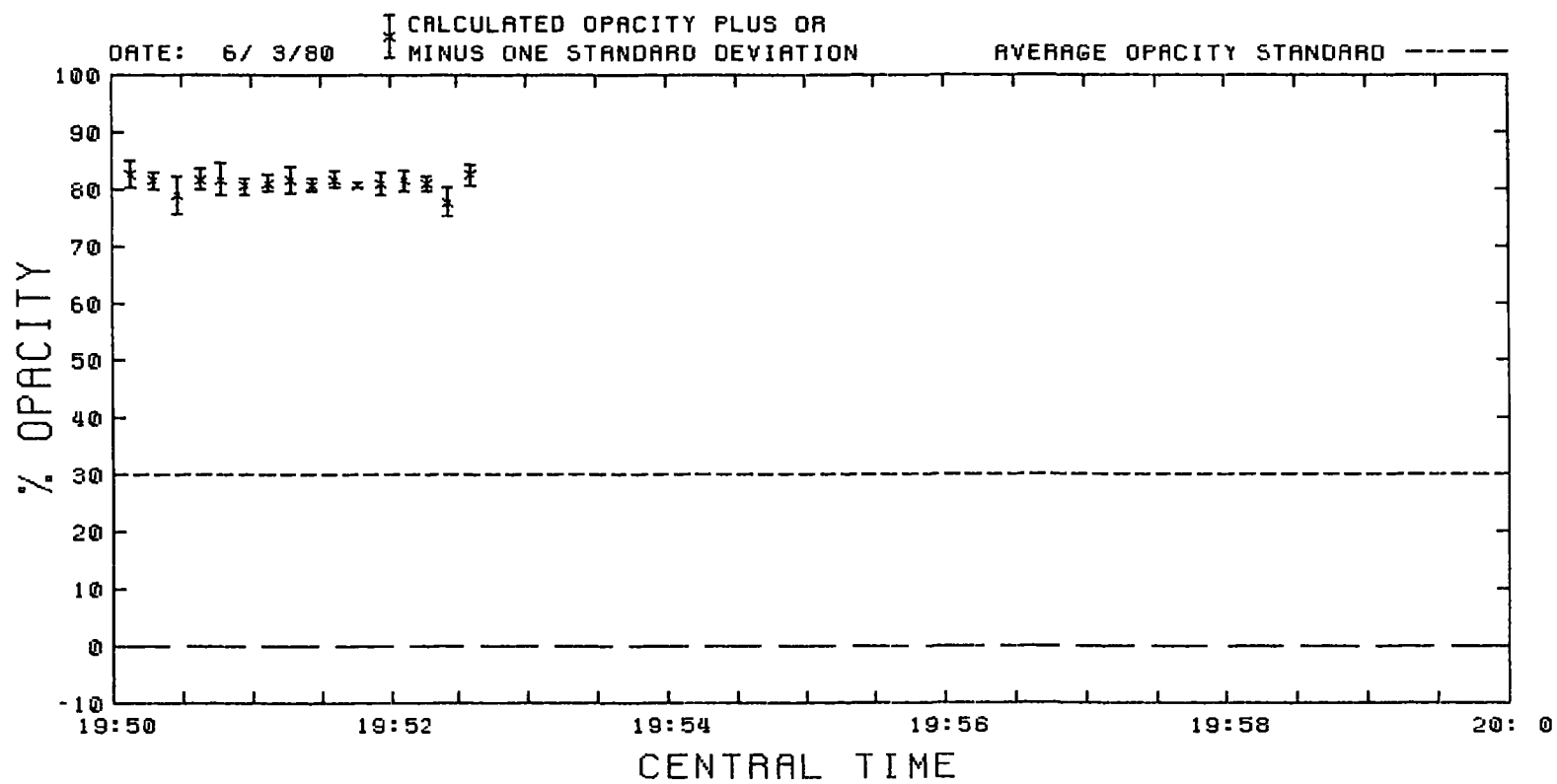
STACK 1, CILCO EDWARDS STATION, BARTONVILLE, IL.



STACK 1, CILCO EDWARDS STATION, BARTONVILLE, IL.



STACK 1, CILCO EDWARDS STATION, BARTONVILLE, IL.



STACK 1, CILCO EDWARDS STATION, BARTONVILLE, IL.

OMEGA-0045

CENTRAL ILLINOIS LIGHT COMPANY
EDWARDS STATION

Stack 2

June 4, 1980, 7:14:50 to 7:29:40

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ENFORCEMENT INVESTIGATIONS CENTER
DENVER, COLORADO 80225

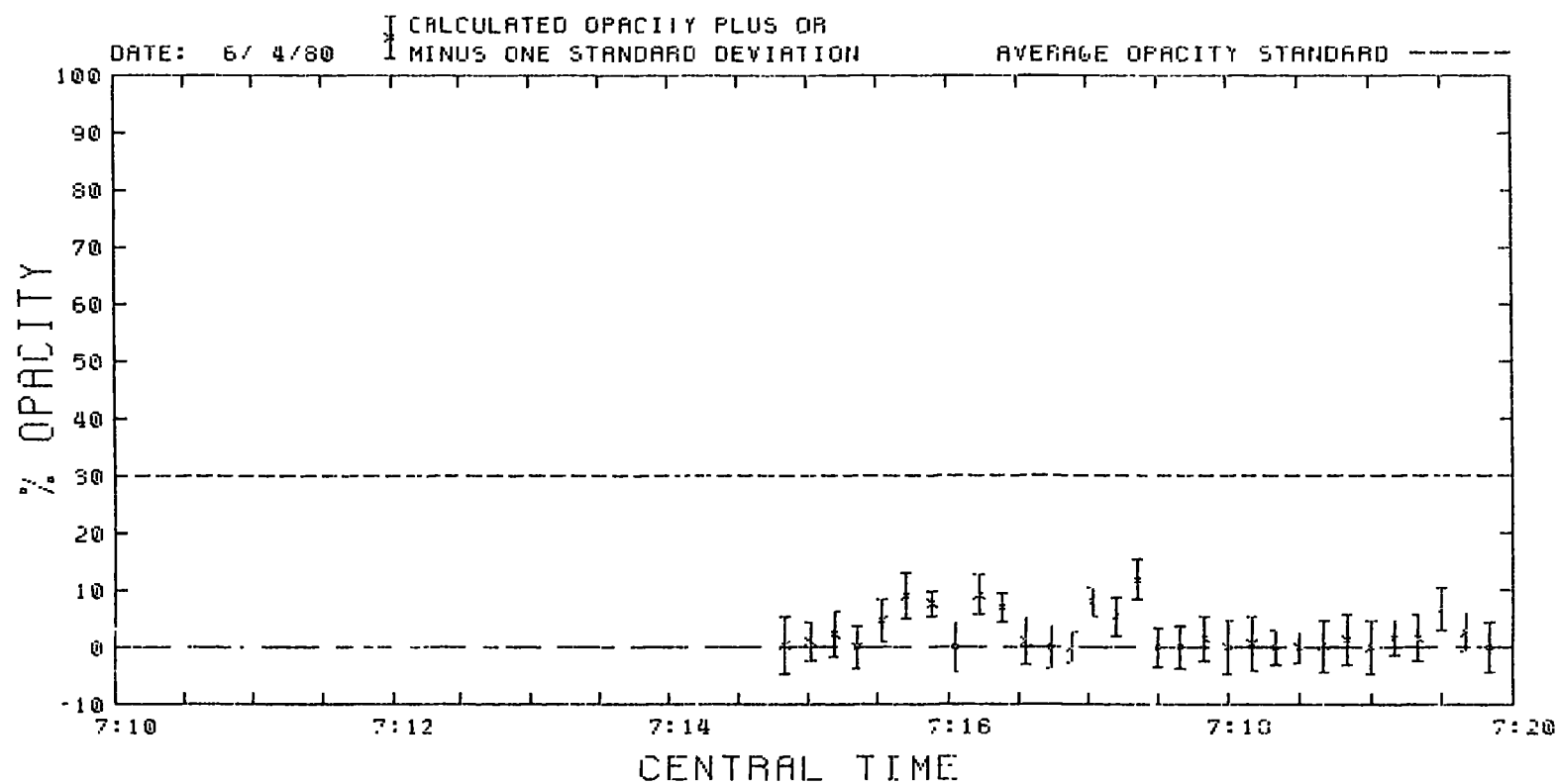
OMEGA-0045. STACK 2. CILCO EDWARDS STATION, BARTONVILLE, IL FROM RT 9 & 24 SIX MINUTE AVERAGES

DATE	TIME	OPACITY	SO	VIOLATION	AVERAGE OPACITY	AVERAGE SO	VIOLATION	NUMBER DISCARDED
6/ 4/80	7 14 50	0	5		0	0		0 OF 0
6/ 4/80	7 15 1	1	3		0	0		0 OF 0
6/ 4/80	7 15 11	2	4		0	0		0 OF 0
6/ 4/80	7 15 21	0	4		0	0		0 OF 0
6/ 4/80	7 15 32	5	4		0	0		0 OF 0
6/ 4/80	7 15 42	9	4		0	0		0 OF 0
6/ 4/80	7 15 53	7	2		0	0		0 OF 0
6/ 4/80	7 16 3	0	4		0	0		0 OF 0
6/ 4/80	7 16 13	9	4		0	0		0 OF 0
6/ 4/80	7 16 23	7	2		0	0		0 OF 0
6/ 4/80	7 16 33	1	4		0	0		0 OF 0
6/ 4/80	7 16 44	0	4		0	0		0 OF 0
6/ 4/80	7 16 53	0	3		0	0		0 OF 0
6/ 4/80	7 17 2	8	2		0	0		0 OF 0
6/ 4/80	7 17 12	5	3		0	0		0 OF 0
6/ 4/80	7 17 21	12	4		0	0		0 OF 0
6/ 4/80	7 17 30	0	3		0	0		0 OF 0
6/ 4/80	7 17 40	0	4		0	0		0 OF 0
6/ 4/80	7 17 50	2	4		0	0		0 OF 0
6/ 4/80	7 18 0	0	5		0	0		0 OF 0
6/ 4/80	7 18 10	1	5		0	0		0 OF 0
6/ 4/80	7 18 20	0	3		0	0		0 OF 0
6/ 4/80	7 18 30	0	3		0	0		0 OF 0
6/ 4/80	7 18 40	0	5		0	0		0 OF 0
6/ 4/80	7 18 50	1	4		0	0		0 OF 0
6/ 4/80	7 19 0	0	5		0	0		0 OF 0
6/ 4/80	7 19 10	2	3		0	0		0 OF 0
6/ 4/80	7 19 20	2	4		0	0		0 OF 0
6/ 4/80	7 19 30	7	4		0	0		0 OF 0
6/ 4/80	7 19 40	3	3		0	0		0 OF 0
6/ 4/80	7 19 50	0	4		0	0		0 OF 0
6/ 4/80	7 20 0	1	4		0	0		0 OF 0
6/ 4/80	7 20 10	0	5		0	0		0 OF 0
6/ 4/80	7 20 20	2	4		0	0		0 OF 0
6/ 4/80	7 20 30	3	5		0	0		0 OF 0
6/ 4/80	7 20 39	6	4		2	4		0 OF 36
6/ 4/80	7 20 49	10	4		2	4		0 OF 37
6/ 4/80	7 20 59	0	4		2	4		0 OF 37
6/ 4/80	7 21 8	5	4		2	4		0 OF 37
6/ 4/80	7 21 18	0	4		2	4		0 OF 37
6/ 4/80	7 21 28	0	4		2	4		0 OF 37
6/ 4/80	7 21 38	1	4		2	4		0 OF 37
6/ 4/80	7 21 48	1	4		2	4		0 OF 37
6/ 4/80	7 21 58	0	4		2	4		0 OF 37
6/ 4/80	7 22 9	0	3		2	4		0 OF 37
6/ 4/80	7 22 19	0	4		1	4		0 OF 37
6/ 4/80	7 22 29	2	4		1	4		0 OF 37
6/ 4/80	7 22 39	6	4		1	4		0 OF 37
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6/ 4/80	7 23 0	3	3		1	4		0 OF 37

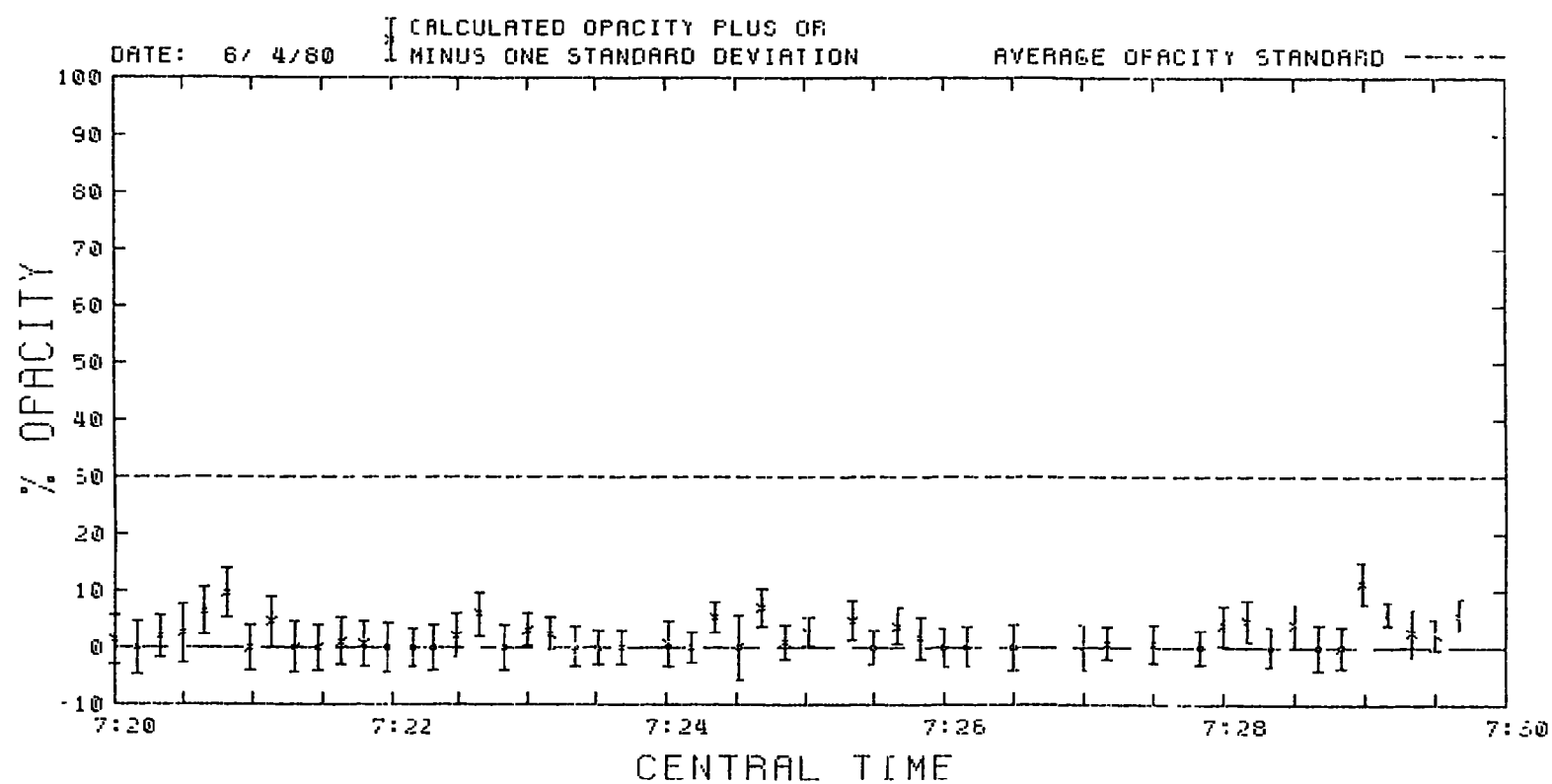
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ENFORCEMENT INVESTIGATIONS CENTER
DENVER, COLORADO 80225

OMEGA-0045, STACK 2, CILCO EDWARDS STATION, BARTONVILLE, IL FROM RT 9 & 24 SIX MINUTE AVERAGES

DATE	TIME	OPACITY	SO VIOLATION	AVERAGE OPACITY	AVERAGE SO VIOLATION	NUMBER DISCARDED
6/ 4/80	7 23 10	2	3	1	4	0 OF 37
6/ 4/80	7 23 21	0	4	1	4	0 OF 37
6/ 4/80	7 23 31	0	3	1	4	0 OF 36
6/ 4/80	7 23 41	0	3	0	4	0 OF 36
6/ 4/80	7 24: 1	1	4	0	4	0 OF 35
6/ 4/80	7 24 11	0	3	0	4	0 OF 35
6/ 4/80	7 24 21	5	3	1	4	0 OF 35
6/ 4/80	7 24 31	0	6	1	4	0 OF 35
6/ 4/80	7 24 41	7	3	1	4	0 OF 35
6/ 4/80	7 24 51	1	3	1	4	0 OF 35
6/ 4/80	7 25 1	3	3	1	4	0 OF 35
6/ 4/80	7 25 20	5	4	1	4	0 OF 35
6/ 4/80	7 25 30	0	3	1	4	0 OF 35
6/ 4/80	7 25 40	4	3	1	4	0 OF 35
6/ 4/80	7 25 50	2	4	1	4	0 OF 35
6/ 4/80	7 26 0	0	3	1	4	0 OF 35
6/ 4/80	7 26 10	0	4	1	4	0 OF 35
6/ 4/80	7 26 30	0	4	0	4	0 OF 34
6/ 4/80	7 27 0	0	4	0	4	0 OF 31
6/ 4/80	7 27 10	1	3	0	4	0 OF 31
6/ 4/80	7 27 30	1	3	0	4	0 OF 30
6/ 4/80	7 27 50	0	3	0	3	0 OF 29
6/ 4/80	7 28 0	4	4	0	3	0 OF 29
6/ 4/80	7 28 10	5	4	0	3	0 OF 29
6/ 4/80	7 28 20	0	4	0	3	0 OF 29
6/ 4/80	7 28 30	4	4	0	3	0 OF 29
6/ 4/80	7 28 40	0	4	0	3	0 OF 29
6/ 4/80	7 28 50	0	4	0	3	0 OF 30
6/ 4/80	7 28 59	11	4	0	3	0 OF 30
6/ 4/80	7 29 10	6	2	1	3	0 OF 30
6/ 4/80	7 29 20	2	4	1	3	0 OF 30
6/ 4/80	7 29 30	2	3	1	3	0 OF 30
6/ 4/80	7 29 40	6	3	1	3	0 OF 30



STACK 2. CILCO EDWARDS STATION, BARTONVILLE, IL



STACK 2. CILCO EDWARDS STATION, BANTONVILLE, IL

OMEGA-0046

CENTRAL ILLINOIS LIGHT COMPANY
EDWARDS STATION

Stack 1

June 4, 1980, 7:41:50 to 7:57:30

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ENFORCEMENT INVESTIGATIONS CENTER
DENVER, COLORADO 80225

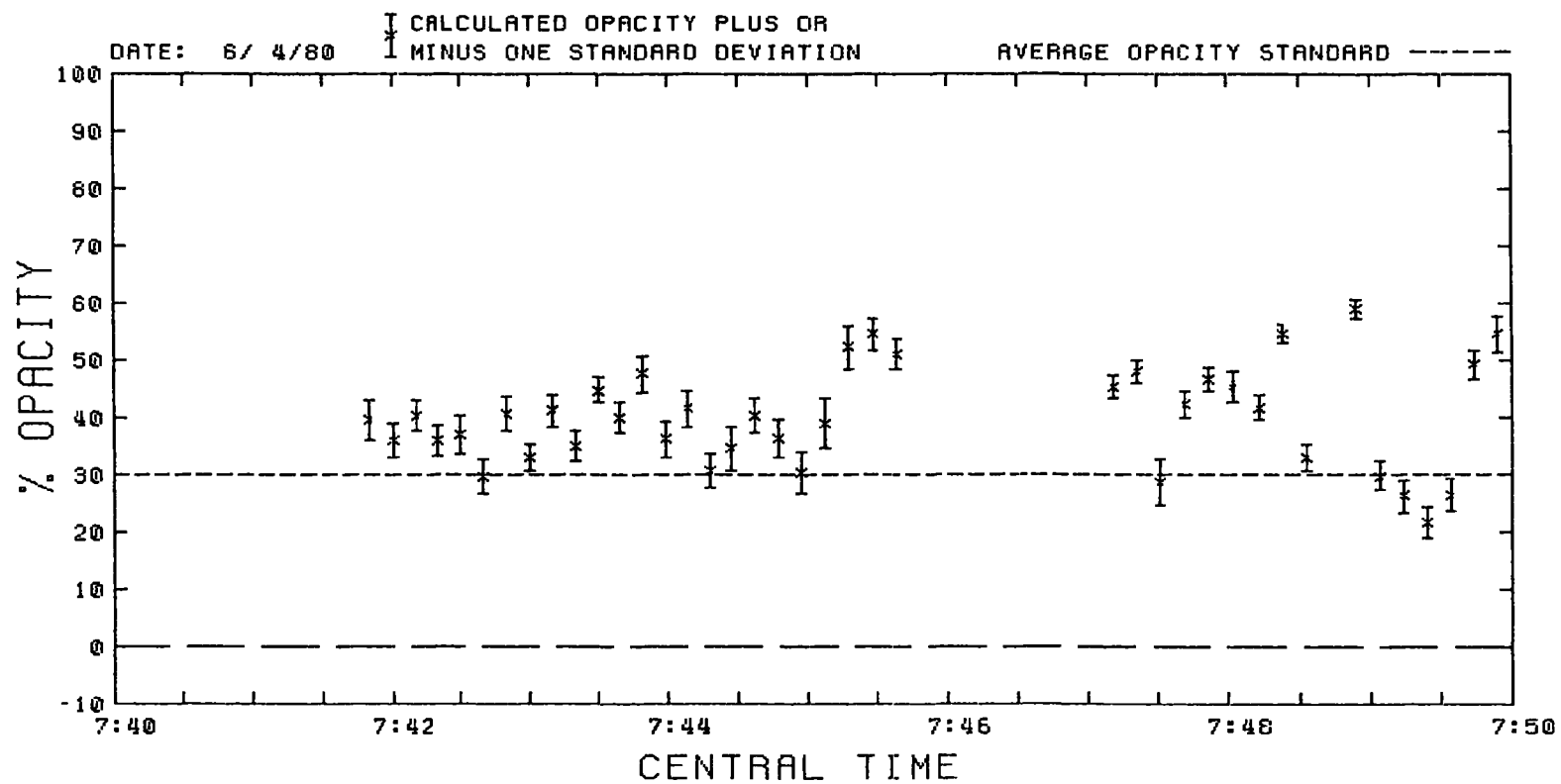
OMEGA-0046, STACK 1, CILCO EDWARDS STATION, BARTONVILLE, IL FROM RT 9 & 24 SIX MINUTE AVERAGES
DATE TIME OPACITY SO VIOLATION AVERAGE OPACITY AVERAGE SO VIOLATION NUMBER DISCARDED

6/ 4/80	7 41 50	40	3		0	0		0 OF	0
6/ 4/80	7 42 0	36	3		0	0		0 OF	0
6/ 4/80	7 42 10	40	3		0	0		0 OF	0
6/ 4/80	7 42 20	36	3		0	0		0 OF	0
6/ 4/80	7 42 30	37	3		0	0		0 OF	0
6/ 4/80	7 42 40	30	3		0	0		0 OF	0
6/ 4/80	7 42 50	41	3		0	0		0 OF	0
6/ 4/80	7 43 0	33	2		0	0		0 OF	0
6/ 4/80	7 43 10	41	3		0	0		0 OF	0
6/ 4/80	7 43 20	35	3		0	0		0 OF	0
6/ 4/80	7 43 30	45	2		0	0		0 OF	0
6/ 4/80	7 43 39	40	3		0	0		0 OF	0
6/ 4/80	7 43 49	48	3		0	0		0 OF	0
6/ 4/80	7 43 59	36	3		0	0		0 OF	0
6/ 4/80	7 44 8	42	3		0	0		0 OF	0
6/ 4/80	7 44 18	31	3		0	0		0 OF	0
6/ 4/80	7 44 27	35	4		0	0		0 OF	0
6/ 4/80	7 44 37	40	3		0	0		0 OF	0
6/ 4/80	7 44 47	36	3		0	0		0 OF	0
6/ 4/80	7 44 57	30	4		0	0		0 OF	0
6/ 4/80	7 45 7	39	4		0	0		0 OF	0
6/ 4/80	7 45 17	52	4		0	0		0 OF	0
6/ 4/80	7 45 28	55	3		0	0		0 OF	0
6/ 4/80	7 45 38	51	3		0	0		0 OF	0
6/ 4/80	7 47 11	45	2		0	0		0 OF	0
6/ 4/80	7 47 21	48	2		0	0		0 OF	0
6/ 4/80	7 47 31	29	4		40	3	****	0 OF	27
6/ 4/80	7 47 42	42	2		40	3	****	0 OF	28
6/ 4/80	7 47 52	47	2		40	3	****	0 OF	28
6/ 4/80	7 48 2	45	3		40	3	****	0 OF	28
6/ 4/80	7 48 13	42	2		40	3	****	0 OF	28
6/ 4/80	7 48 23	55	2		41	3	****	0 OF	28
6/ 4/80	7 48 33	33	2		41	3	****	0 OF	28
6/ 4/80	7 48 54	59	2		42	3	****	0 OF	27
6/ 4/80	7 49 4	30	2		42	3	****	0 OF	27
6/ 4/80	7 49 14	26	3		41	3	****	0 OF	27
6/ 4/80	7 49 24	22	3		41	3	****	0 OF	27
6/ 4/80	7 49 34	26	3		40	3	****	0 OF	27
6/ 4/80	7 49 44	49	2		40	3	****	0 OF	27
6/ 4/80	7 49 54	55	3		41	3	****	0 OF	27
6/ 4/80	7 50 5	32	4		41	3	****	0 OF	27
6/ 4/80	7 50 15	27	4		40	3	****	0 OF	27
6/ 4/80	7 50 35	59	2		41	3	****	0 OF	26
6/ 4/80	7 50 55	26	3		41	3	****	0 OF	25
6/ 4/80	7 51 5	33	3		41	3	****	0 OF	25
6/ 4/80	7 51 16	32	2		41	3	****	0 OF	25
6/ 4/80	7 51 26	15	3		39	3	****	0 OF	25
6/ 4/80	7 51 36	29	2		38	3	****	0 OF	25
6/ 4/80	7 51 47	18	2		0	0		0 OF	0
6/ 4/80	7 51 57	16	4		0	0		0 OF	0

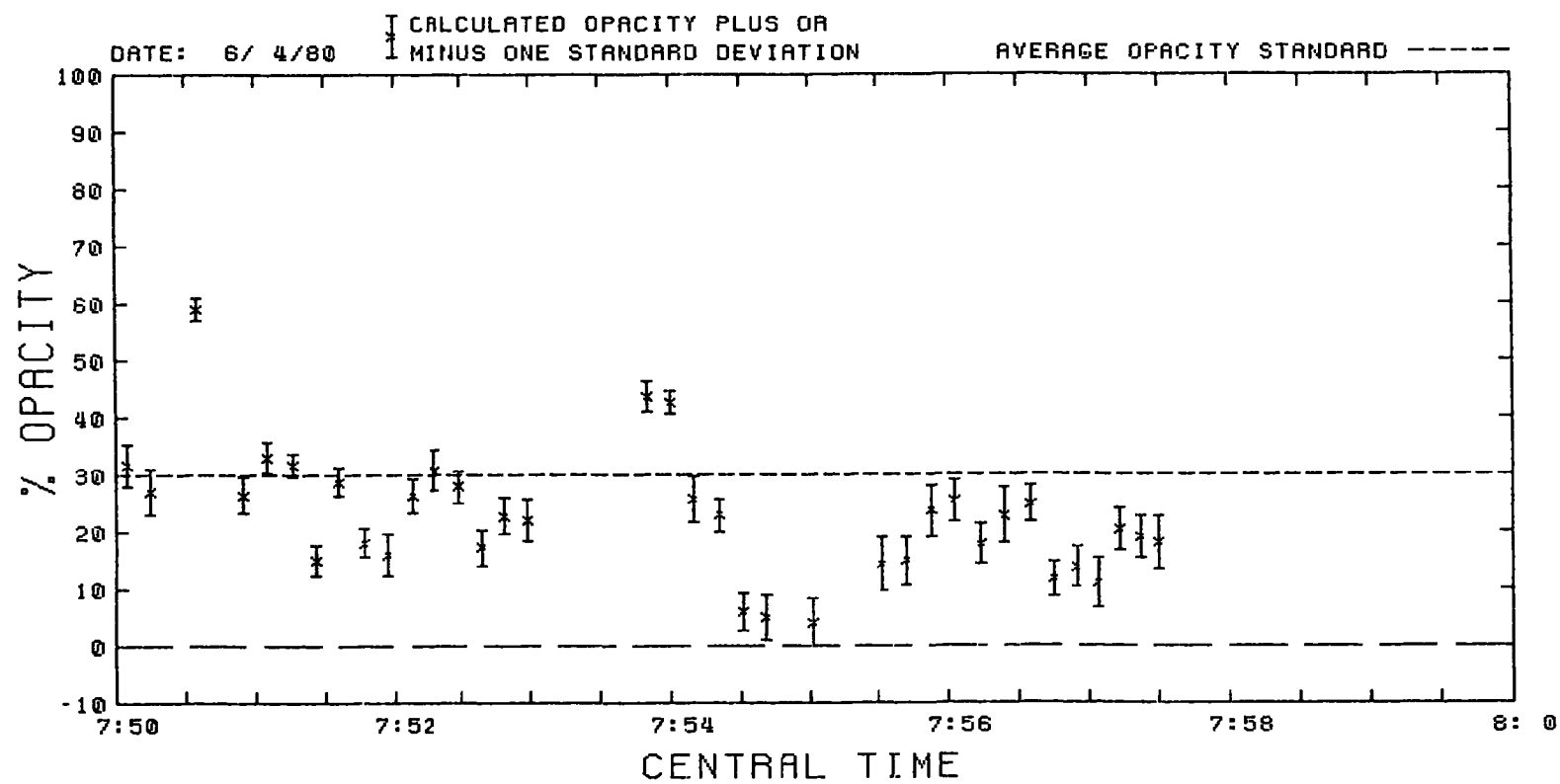
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ENFORCEMENT INVESTIGATIONS CENTER
DENVER, COLORADO 80225

OMEGA-0046, STACK 1, CILCO EDWARDS STATION, BARTONVILLE, IL FROM RT 9 & 24 SIX MINUTE AVERAGES
DATE TIME OPACITY SO VIOLATION AVERAGE OPACITY AVERAGE SO VIOLATION NUMBER DISCARDED

6/ 4/80	7 52 8	26	3		0	0		0 OF 0
6/ 4/80	7 52 18	31	4		0	0		0 OF 0
6/ 4/80	7 52 29	28	3		0	0		0 OF 0
6/ 4/80	7 52 39	17	3		0	0		0 OF 0
6/ 4/80	7 52 49	23	3		0	0		0 OF 0
6/ 4/80	7 52 59	22	4		34	3	****	0 OF 32
6/ 4/80	7 53 50	44	3		33	3	****	0 OF 29
6/ 4/80	7 54 0	43	2		33	3	****	0 OF 29
6/ 4/80	7 54 10	26	4		33	3	****	0 OF 29
6/ 4/80	7 54 21	23	3		32	3	****	0 OF 29
6/ 4/80	7 54 31	6	3		30	3	****	0 OF 29
6/ 4/80	7 54 41	5	4		29	3		0 OF 29
6/ 4/80	7 55 1	4	4		27	3		0 OF 29
6/ 4/80	7 55 32	14	5		27	3		0 OF 27
6/ 4/80	7 55 42	15	4		27	3		0 OF 27
6/ 4/80	7 55 53	24	5		26	3		0 OF 27
6/ 4/80	7 56 3	25	4		25	3		0 OF 27
6/ 4/80	7 56 14	18	3		24	3		0 OF 27
6/ 4/80	7 56 24	23	5		24	3		0 OF 27
6/ 4/80	7 56 35	25	3		24	3		0 OF 28
6/ 4/80	7 56 45	12	3		22	3		0 OF 28
6/ 4/80	7 56 55	14	4		22	3		0 OF 29
6/ 4/80	7 57 4	11	4		21	3		0 OF 29
6/ 4/80	7 57 13	20	4		21	3		0 OF 29
6/ 4/80	7 57 22	19	4		21	4		0 OF 29
6/ 4/80	7 57 30	18	5		21	4		0 OF 29



STACK 1, CILCO EDWARDS STATION, BARTONVILLE, IL.



STACK 1, CILCO EDWARDS STATION, BARTONVILLE, IL.

OMEGA-0047

CENTRAL ILLINOIS LIGHT COMPANY
EDWARDS STATION

Stack 2

June 4, 1980, 8:27:49 to 8:41:21

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ENFORCEMENT INVESTIGATIONS CENTER
DENVER, COLORADO 80225

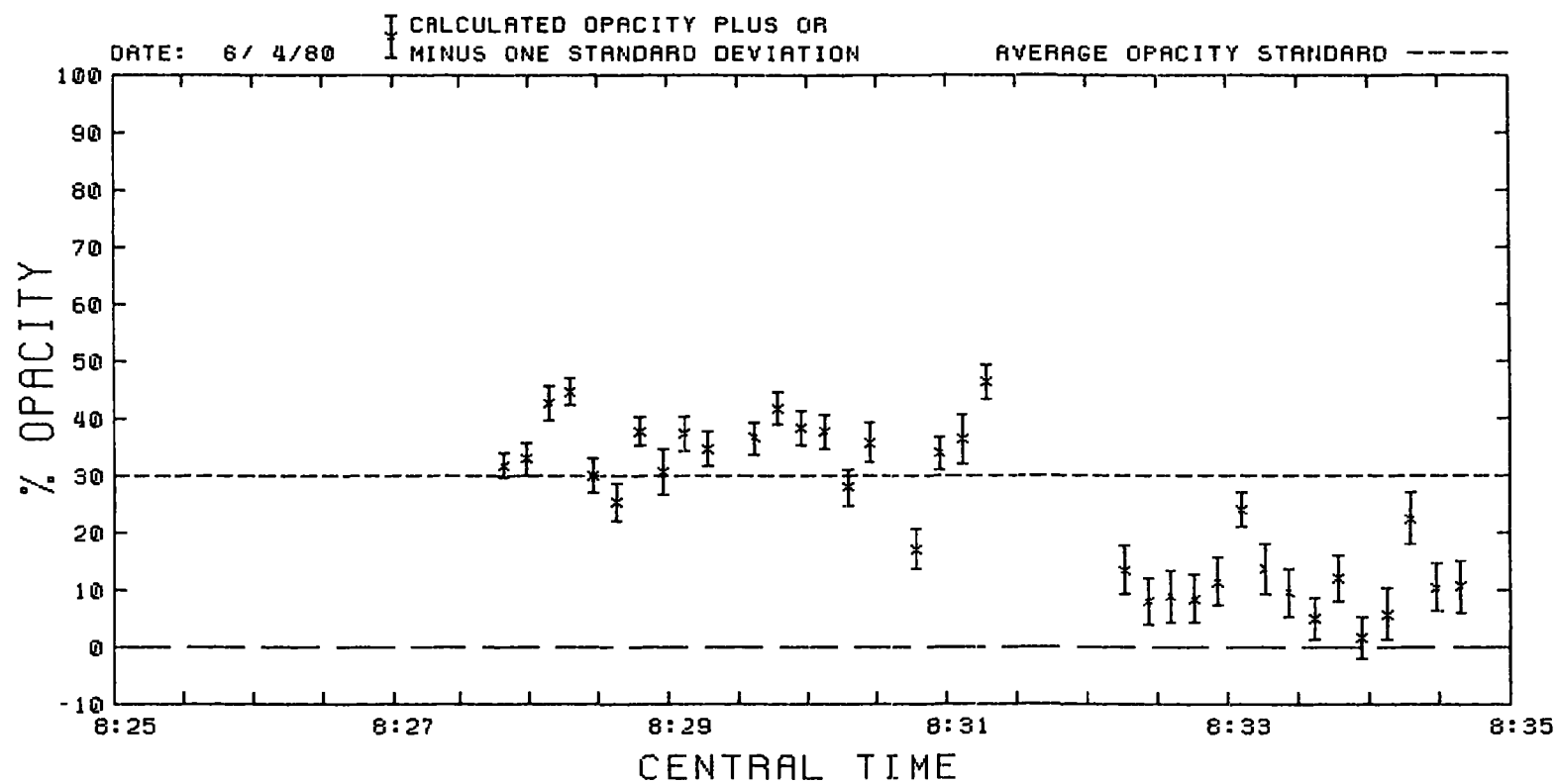
OMEGA-0047, STACK 2, CILCO EDWARDS STATION, BARTONVILLE, IL FROM RT 9 & 24 SIX MINUTE AVERAGES

DATE	TIME	OPACITY	SO VIOLATION	AVERAGE OPACITY	AVERAGE SO VIOLATION	NUMBER DISCARDED
6/ 4/80	8 27 49	32	2	0	0	0 OF 0
6/ 4/80	8 27 59	33	3	0	0	0 OF 0
6/ 4/80	8 28 9	43	3	0	0	0 OF 0
6/ 4/80	8 28 18	45	2	0	0	0 OF 0
6/ 4/80	8 28 28	30	3	0	0	0 OF 0
6/ 4/80	8 28 38	25	3	0	0	0 OF 0
6/ 4/80	8 28 48	38	3	0	0	0 OF 0
6/ 4/80	8 28 58	31	4	0	0	0 OF 0
6/ 4/80	8 29 7	37	3	0	0	0 OF 0
6/ 4/80	8 29 17	35	3	0	0	0 OF 0
6/ 4/80	8 29 37	37	3	0	0	0 OF 0
6/ 4/80	8 29 47	42	3	0	0	0 OF 0
6/ 4/80	8 29 57	38	3	0	0	0 OF 0
6/ 4/80	8 30 7	38	3	0	0	0 OF 0
6/ 4/80	8 30 17	28	3	0	0	0 OF 0
6/ 4/80	8 30 27	36	4	0	0	0 OF 0
6/ 4/80	8 30 47	17	4	0	0	0 OF 0
6/ 4/80	8 30 57	34	3	0	0	0 OF 0
6/ 4/80	8 31 7	36	4	0	0	0 OF 0
6/ 4/80	8 31 17	46	3	0	0	0 OF 0
6/ 4/80	8 32 16	13	4	0	0	0 OF 0
6/ 4/80	8 32 26	8	4	0	0	0 OF 0
6/ 4/80	8 32 36	9	5	0	0	0 OF 0
6/ 4/80	8 32 46	8	4	0	0	0 OF 0
6/ 4/80	8 32 56	11	4	0	0	0 OF 0
6/ 4/80	8 33 6	24	3	0	0	0 OF 0
6/ 4/80	8 33 16	14	4	0	0	0 OF 0
6/ 4/80	8 33 26	10	4	0	0	0 OF 0
6/ 4/80	8 33 37	5	4	28	3	0 OF 29
6/ 4/80	8 33 47	12	4	27	3	0 OF 30
6/ 4/80	8 33 57	2	4	26	3	0 OF 30
6/ 4/80	8 34 8	6	4	25	4	0 OF 30
6/ 4/80	8 34 18	22	5	25	4	0 OF 30
6/ 4/80	8 34 29	10	4	23	4	0 OF 29
6/ 4/80	8 34 39	11	5	23	4	0 OF 29
6/ 4/80	8 35 32	22	4	21	4	0 OF 26
6/ 4/80	8 35 42	24	4	20	4	0 OF 26
6/ 4/80	8 35 52	37	3	20	4	0 OF 26
6/ 4/80	8 36 1	21	4	19	4	0 OF 26
6/ 4/80	8 36 10	23	2	19	4	0 OF 26
6/ 4/80	8 36 19	36	3	19	4	0 OF 26
6/ 4/80	8 36 29	37	4	19	4	0 OF 26
6/ 4/80	8 36 39	41	4	20	4	0 OF 27
6/ 4/80	8 36 49	8	5	20	4	0 OF 27
6/ 4/80	8 36 58	12	3	19	4	0 OF 27
6/ 4/80	8 37 8	20	5	18	4	0 OF 27
6/ 4/80	8 37 18	17	4	0	0	0 OF 0
6/ 4/80	8 37 29	6	4	0	0	0 OF 0
6/ 4/80	8 37 39	11	4	0	0	0 OF 0
6/ 4/80	8 37 49	19	4	0	0	0 OF 0

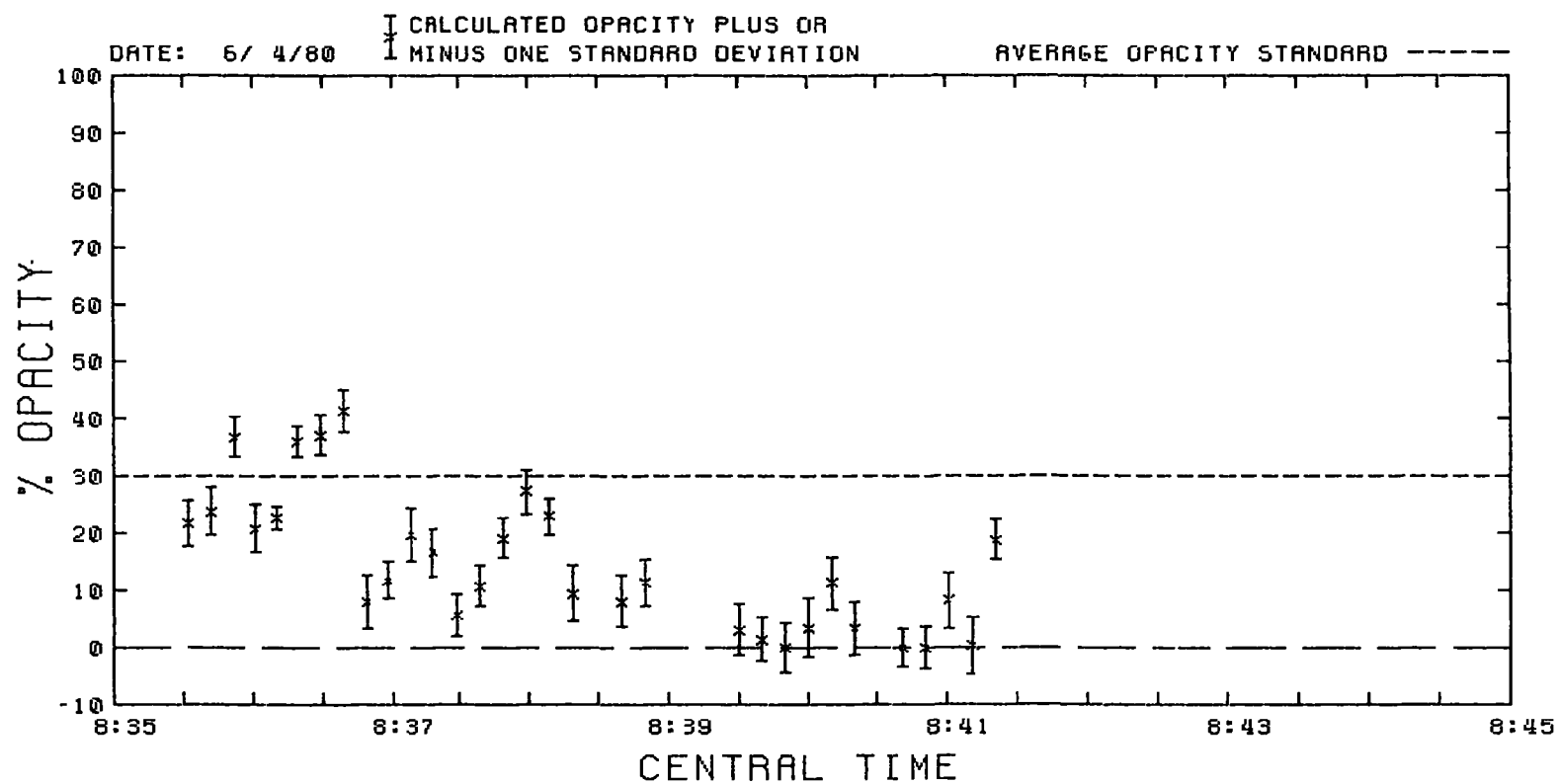
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ENFORCEMENT INVESTIGATIONS CENTER
DENVER, COLORADO 80225

OMEGA-0047, STACK 2, CILCO EDWARDS STATION, BARTONVILLE, IL FROM RT 9 & 24 SIX MINUTE AVERAGES
DATE TIME OPACITY SO VIOLATION AVERAGE OPACITY AVERAGE SO VIOLATION NUMBER DISCARDED

6/ 4/80	8 37 59	27	4	17	4	0 OF	31
6/ 4/80	8 38 9	23	3	17	4	0 OF	32
6/ 4/80	8 38 19	9	5	17	4	0 OF	32
6/ 4/80	8 38 40	8	4	17	4	0 OF	31
6/ 4/80	8 38 50	11	4	17	4	0 OF	31
6/ 4/80	8 39 30	3	4	17	4	0 OF	28
6/ 4/80	8 39 40	1	4	17	4	0 OF	28
6/ 4/80	8 39 50	0	4	17	4	0 OF	28
6/ 4/80	8 40 0	3	5	17	4	0 OF	28
6/ 4/80	8 40 10	11	5	17	4	0 OF	28
6/ 4/80	8 40 20	3	5	16	4	0 OF	28
6/ 4/80	8 40 41	0	3	0	0	0 OF	0
6/ 4/80	8 40 51	0	4	0	0	0 OF	0
6/ 4/80	8 41 1	8	5	0	0	0 OF	0
6/ 4/80	8 41 11	0	5	0	0	0 OF	0
6/ 4/80	8 41 21	19	3	15	4	0 OF	31



STACK 2, CILCO EDWARDS STATION, BARTONVILLE, IL.



STACK 2, CILCO EDWARDS STATION, BARTONVILLE, IL.