SECOR
International Incorporated

May 19, 1997

Dr. Ronald R. Bellamy, Chief
Decommissioning and Lab Branch
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Re: Monthly Status Report
Period of Work: April 1 through April 30, 1997
Former EPEC Polymers Facility Located at
Industrial Highway, Fords, New Jersey

Dear Dr. Bellamy:

During the month of April 1997, SECOR International Inc. (*SECOR*) continued radioactive decommissioning work and performed on site screening and initial removal activities at the former EPEC Polymers facility located on Industrial Highway in Fords, New Jersey. Removal activities focused on removal of concrete, soil, and pipes in the Catalyst Preparation Room (CPR) in the west end of Building 12, removal of concrete from the Converter Room in the east end of Building 12, and removal of soil covering pipes exiting the CPR south of Building 12. Survey and screening activities consisted of gamma spectroscopy analysis of drum and environmental samples, continuing initial exposure rate surveys of outdoor affected and potentially affected areas, a background exposure rate survey, survey of walls in the CPR, and general screening of soil and concrete surfaces during removal activities. A total of 22 drums of contaminated material were packaged in April.

This report contains sections summarizing removal activities, site screening and surveys, materials handling, and other miscellaneous activities. Other sections in the report pertain to personal dosimetry, site visitors, and future on-site activities. Relevant figures and tables are also provided and referenced in the report.

I. Removal Activities

The following section summarizes the removal activities in the CPR, the Converter Room, and south of Building 12 for the month of April:

Catalyst Preparation Room

- The concrete floor surface was scabbled with a rotary hammer to remove any existing radioactive surface contamination. The location of the scabbling work is indicated as Trench No. 5 on Figure 2. The concrete floor covering Pipe No. 3 (Trench No. 5 on Figure 2) was cut with a walk-behind saw equipped with a diamond blade and the concrete was removed with a

111-A North Gold Drive, Robbinsville, NJ 08691-1603 (609) 259-6424 (609) 259-0520 FAX

B/24

jackhammer. Fill soil covering the pipe was excavated to expose the pipe. Pipe No. 3 was removed, placed in drums, and plugged at its exit from the building. All loose concrete and soil was moved to Building 31 for detailed screening, segregation, and packaging for disposal.

- Pipe No. 2 was removed, placed in a drum, and plugged at its exit from the building. The location of the pipe is indicated as Trench No. 2 on Figure 2. Approximately 25 mL of liquid mercury was found in Pipe No. 2. The pipe sludge was placed in buckets in Building 31 and will undergo radiological and chemical analysis. The first 6 inches of contaminated soil was removed from Trench No. 2 after pipe removal and moved to Building 31 for screening, segregation, and packaging for disposal. Preliminary screening of the soil within the trench indicates the need for further excavation.

- Pipe No. 1 was removed and placed in a drum. The location is indicated as Trench No. 3 on Figure 2.

- The concrete bottom and walls of Trench No. 1 were removed with a jackhammer, moved to Building 31, and scabbled with a rotary hammer equipped with a chisel bit. All scabbling activities were conducted within a containment structure erected in Building 31. The temporary containment structure will be dismantled and decontaminated as necessary after it is no longer required for segregation activities. After scabbling, the concrete was screened and segregated. The contaminated concrete pieces were placed in a drum and the clean concrete was placed in the clean material stockpile area in Building 31.

- Portions of the north and south walls were scabbled with a rotary hammer equipped with a chisel bit. Since radioactive surface contamination was discovered on portions of the entire north and south walls, scabbling coverage was not limited to the lower walls but continued to the ceiling in some areas. Contaminated concrete pieces were placed in a drum and clean concrete was placed in the clean material stockpile area in Building 31.

- Ceiling pipes identified with surface contamination were removed with a band saw. The pipes were placed in Building 31 for decontamination.

Building 12

- Soil was excavated outside Building 12 to expose Pipe Nos. 2 and 3 in an attempt to locate the flow directions of the pipes. A backhoe will most likely be required for further investigation of these pipes since the pipes are buried under approximately 4 feet of soil.

- Within the Converter Room (see Figure 3), contaminated bricks were removed from Trench No. 4 and placed in Building 31 for segregation and packaging for disposal.

II. Site Surveys and Screening

The following section summarizes site survey and screening activities that include gamma spectroscopy analyses, exposure rate surveys, surface contamination surveys, and general screening activities:

- Table 1 lists samples that were analyzed with the gamma spectroscopy system. The results confirm that Drum Nos. 1-2 through 1-23 contain only radioactive waste and not intermediate or clean material. The gamma spectroscopy analysis confirms that Drum 2-1 contains intermediate waste. Radioactive waste is defined by *SECOR* as waste measured at equal to or greater than 100 counts per minute (cpm) with the Ludlum Model 2221 scaler rate meter attached to the Ludlum Model 44-40 G-M detector. Intermediate material is defined by *SECOR* as material measured between and including 65 to 99 cpm. Clean material is defined by *SECOR* as material measured at less than 65 cpm. The screening and segregation efforts are properly identifying contaminated material and clean and intermediate waste is not being placed in drums as radioactive waste.

  The nuclides U-235 and Th-234 have been added to page 2 of Table 1. The Th-234 isotope will be used as further clarification of the U-238 concentration by comparison with the Pa-234m concentrations. However, the Pa-234m concentrations will still be used to infer the U-238 concentrations unless the Pa-234m concentrations are lower than the minimum detectable activity (MDA). If the Pa-234m concentrations are below the MDA, the Th-234 isotope will be used to infer the U-238 concentration. The U-235 concentrations will be used to develop the U-235/Pa-234m ratio in order to determine whether the contamination is due to depleted uranium or natural uranium. This ratio has also been added to page 2 of Table 1.

- Table 2 provides gamma spectroscopy results from environmental samples. BRICK-1 is a sample of scabbled brick from the CPR. The analysis confirms that the scabbled brick is contaminated. The sludge samples were collected from sumps in the affected areas (see Figure 5). SLUDGE-2 and SLUDGE-3 were collected from sumps located in Area 3000 and SLUDGE-7 was collected from a sump located in Area 1000. The analyses indicate concentrations of uranium in the sludge greater than 35 pCi/g. In accordance with the approved Work Plan, further sampling of all sumps in the affected and potentially affected areas will be performed.

- Table 3 provides general screening results for the month of April in the CPR and Converter Room. These field measurements are used to determine whether the screened area requires remediation. Loose soil and concrete that measured equal to or greater than 100 cpm was removed and placed in Building 31 for further screening, segregation, and packaging for disposal.

- Figure 4 indicates the results of the background exposure rate survey. The survey was conducted on a 30 x 30 meter grid south of the transformer station (see Figure 1). Measurements were collected at each grid intersection at approximately 1 meter from the surface and in near-contact with the surface. A statistical analysis of the data will be provided in the next monthly report.

- The affected and potentially affected areas are identified on Figure 5. The affected area in the vicinity of the Building K-7 foundation has been designated as Area 1000. The affected area in the vicinity of Buildings K-12 and 12A has been designated as Area 3000. The potentially affected area between the Building K-7 foundation and Building K-12 has been designated as Area 2000. Figures 6 through 8 provide the updated initial exposure rate survey results for each area.

- Figures 9 and 10 provide the screening results prior to and after scabbling of the north and south walls in the CPR. The walls consist of a red brick whose background radiation was determined by collecting 5 measurements from the second floor, 5 measurements from the third floor, 5 measurements from the fourth floor, 5 measurements from the chimney, and 5 measurements from the exterior of Building K-12. The measurements were collected with the Ludlum Model 2221 attached to the Ludlum Model 44-40 G-M detector. The average brick background value is 70 cpm and the standard deviation is 14 cpm. The values that are used for fixed radioactive surface contamination are 300 cpm averaged over 1 square meter and 900 cpm maximum.

III. Materials Handling

Twenty two 55 gallons drums of radioactive waste and three 55 gallon drums of intermediate waste have been packaged in April. Approximately 15 ft^3 of clean material was segregated in April. To date, 23 drums of radioactive waste and 3 drums of intermediate waste have been packaged. Approximately 19 ft^3 of clean material has been segregated to date and is in storage.

IV. Miscellaneous Activities

Within the CPR, two drainage pipes were removed and replaced with PVC pipe and the roof was tarred to reduce intrusion of precipitation into the impacted remediation areas reducing migration of contaminated material.

V. Personal Dosimetry

There are no dosimetry results for April 1997. As had been discussed, all dosimetry results will be reported quarterly. The next dosimetry results will be reported in the June 1997 report or at the end of remediation activities.

VI. Site Visitors

Table 4 provides a list of visitors that logged in during the reporting period and the purpose of the visit.

VII. Future Plans

Activities that will be performed in May/June 1997 include:

- A radiological and chemical analysis on the sludge from the pipes in the CPR.
- A radiological analysis on sludge from sumps in Areas 1000, 2000, and 3000.
- A statistical analysis on the background exposure rate survey data.

- A gamma exposure rate survey in the affected outdoor areas in Area 3000.
- Gridding, survey, and remediation of the ceiling in the CPR due to the presence of radioactive surface contamination. Pipes and fixtures that have been removed from the ceiling will be decontaminated using a paint stripper and a grinding wheel.
- Survey and scabbling of the east and west walls and floor surfaces in the CPR.
- Removal, screening, segregation, and packaging for disposal contaminated soil remaining in the CPR trenches.

If you have any questions regarding the information provided herein, please call me or Paul Lazaar at (609) 259-6424.

Sincerely,
SECOR International Inc.

Ravi Gupta
Principal-In-Charge

Attachments

c: Project File
R. Towe, EPEC Polymers
T. Jackson, USNRC
J. Moone, NJDEP
P. Lazaar, *SECOR*

FIGURES

Figure 1	Site Plan
Figure 2	Catalyst Preparation Room
Figure 3	Converter Room
Figure 4	Background Exposure Rate Survey
Figure 5	Outdoor Affected and Potentially Affected Areas
Figure 6	Area 1000 Initial Exposure Rate Survey
Figure 7	Area 2000 Initial Exposure Rate Survey
Figure 8	Area 3000 Initial Exposure Rate Survey
Figure 9	South Wall - Catalyst Preparation Room
Figure 10	North Wall - Catalyst Preparation Room

TABLES

Table 1	Gamma Spec Sample Log - Drum Samples
Table 2	Gamma Spec Sample Log - Environmental Samples
Table 3	Screening Log
Table 4	On-site Visitors for April 1997

Table 1
Gamma Spec Sample Log
Drum Samples
Former EPEC Polymers Facility
Industrial Highway
Fords, Middlesex County, New Jersey

	Radionuclide (pCi/g)				Minimum Detectable Activity (pCi/g)				Exp. Rate[2]
Sample ID	Pa-234m[1]	Ra-226	Pb-214	Bi-214	Pa-234m	Ra-226	Pb-214	Bi-214	(uR/hr)
DRUM1-2A	(4.1 +/- 0.7) E+3	(1 +/- 5) E+3	<MDA	<MDA	6.9 E+1	7.4 E+0	5.7 E-3	1.4 E+0	NA
DRUM1-2B	(3.2 +/- 0.5) E+3	(1 +/- 4) E+3	<MDA	(4 +/- 2) E-1	2.0 E+1	1.9 E+0	5.4 E-4	2.9 E-1	60/38
DRUM1-3A	(3.7 +/- 0.7) E+2	(1 +/- 4) E+2	<MDA	<MDA	3.3 E+1	2.0 E+0	1.7 E-3	5.8 E-1	NA
DRUM1-3B	(8.7 +/- 1.5) E+2	(2 +/- 9) E+2	<MDA	(3.6 +/- 1.5) E-1	1.6 E+1	7.2 E-1	2.9 E-4	1.7 E-1	19/13
DRUM1-4A	(6.0 +/- 1.1) E+2	(2 +/- 6) E+2	<MDA	<MDA	3.2 E+1	2.2 E+0	2.0 E-3	5.8 E-1	NA
DRUM1-4B	(5.1 +/- 1.0) E+2	(1 +/- 5) E+2	<MDA	<MDA	3.4 E+1	2.5 E+0	2.7 E-3	6.4 E-1	19/12
DRUM1-5A	(4.3 +/- 0.7) E+2	(2 +/- 7) E+2	<MDA	(3.7 +/- 1.6) E-1	1.6 E+1	1.1 E+0	4.1 E-4	2.1 E-1	NA
DRUM1-5B	(3.5 +/- 0.7) E+2	(1 +/- 5) E+2	<MDA	<MDA	3.0 E+1	2.0 E+0	2.0 E-3	5.5 E-1	17/12
DRUM1-6A	(2.6 +/- 0.9) E+2	(1 +/- 3) E+2	<MDA	<MDA	7.8 E+1	5.0 E+0	1.4 E-2	1.5 E+0	NA
DRUM1-6B	(2.4 +/- 0.7) E+2	(1 +/- 2) E+2	<MDA	<MDA	6.1 E+1	3.7 E+0	9.2 E-3	1.0 E+0	14/11
DRUM1-7A	(2.5 +/- 0.5) E+2	(1 +/- 3) E+2	<MDA	<MDA	2.7 E+1	1.7 E+0	1.8 E-3	4.6 E-1	NA
DRUM1-7B	(3.9 +/- 0.7) E+3	(1 +/- 2) E+3	<MDA	(7 +/- 6) E-1	5.7 E+1	6.9 E+0	5.4 E-3	7.8 E-1	80/50
DRUM1-8A	(5 +/- 2) E+1	(2 +/- 7) E+1	<MDA	<MDA	2.5 E+1	1.6 E+0	2.0 E-3	4.8 E-1	NA
DRUM1-8B	(3.1 +/- 1.1) E+2	(4 +/- 18) E+1	<MDA	<MDA	1.1 E+2	6.9 E+0	1.8 E-2	2.1 E+0	31/29
DRUM1-9A	(2.9 +/- 0.6) E+2	(1 +/- 3) E+2	<MDA	<MDA	3.3 E+1	2.0 E+0	2.5 E-3	5.6 E-1	NA
DRUM1-9B	(3.5 +/- 2.1) E+1	(1 +/- 3) E+1	<MDA	<MDA	2.9 E+1	1.5 E+0	1.6 E-3	5.1 E-1	14/11
DRM1-10B	(6 +/- 2) E+1	(2 +/- 9) E+1	<MDA	<MDA	3.1 E+1	1.8 E+0	2.1 E-3	5.7 E-1	9/8
DRM1-11B	(1.5 +/- 0.5) E+2	(2 +/- 10) E+1	<MDA	<MDA	5.4 E+1	3.0 E+0	5.8 E-3	6.0 E-1	18/13
DRM1-12B	(4.9 +/- 1.2) E+1	(1 +/- 6) E+1	<MDA	<MDA	1.3 E+1	7.3 E-1	3.6 E-4	2.2 E-1	43/28
DRM1-13B	(1.0 +/- 0.4) E+2	(4 +/- 15) E+1	<MDA	<MDA	6.9 E+1	3.6 E+0	3.1 E-3	1.2 E+0	16/13
DRM1-14A	(4.6 +/- 0.8) E+2	(1 +/- 4) E+2	<MDA	<MDA	2.7 E+1	1.8 E+0	1.6 E-3	5.0 E-1	NA
DRM1-14B	(3.3 +/- 0.8) E+2	(1 +/- 3) E+2	<MDA	<MDA	4.5 E+1	3.1 E+0	5.3 E-3	8.0 E-1	20/20
DRM1-15A	(1.2 +/- 0.4) E+2	(3 +/- 11) E+1	<MDA	<MDA	4.2 E+1	2.4 E+0	4.7 E-3	7.3 E-1	NA
DRM1-15B	(2.9 +/- 0.6) E+2	(4 +/- 15) E+1	<MDA	<MDA	4.2 E+1	2.5 E+0	3.6 E-3	7.3 E-1	42/30
DRM1-16A	(2.1 +/- 0.4) E+3	(3 +/- 12) E+2	<MDA	<MDA	4.8 E+1	4.4 E+0	4.6 E-3	8.7 E-1	NA
DRM1-16B	(9 +/- 3) E+1	(3 +/- 12) E+1	<MDA	<MDA	3.7 E+1	2.1 E+0	4.2 E-3	6.7 E-1	15/11
DRM1-17A	(5.5 +/- 1.1) E+2	(1 +/- 4) E+2	<MDA	<MDA	4.5 E+1	3.0 E+0	4.7 E-3	7.8 E-1	NA
DRM1-17B	(1.4 +/- 0.2) E+4	(3 +/- 13) E+3	<MDA	<MDA	9.8 E+1	1.6 E+1	1.1 E-2	2.2 E+0	210/170
DRM1-18A	(1.9 +/- 0.5) E+2	(4 +/- 18) E+1	<MDA	<MDA	4.4 E+1	2.7 E+0	5.3 E-3	8.1 E-1	NA
DRM1-18B	(3.3 +/- 0.6) E+2	(1 +/- 3) E+2	<MDA	<MDA	3.3 E+1	1.9 E+0	2.6 E-3	5.4 E-1	17/11
DRM1-19A	(1.6 +/- 0.5) E+2	(4 +/- 18) E+1	<MDA	<MDA	4.5 E+1	2.7 E+0	5.4 E-3	7.6 E-1	NA
DRM1-19B	(1.1 +/- 0.2) E+3	(3 +/- 12) E+2	<MDA	(1.3 +/- 0.4) E+0	3.8 E+1	2.9 E+0	2.7 E-3	5.2 E-1	80/80
DRM1-20A	(6 +/- 2) E+1	(2 +/- 10) E+1	<MDA	<MDA	3.0 E+1	1.7 E+0	3.0 E-3	6.0 E-1	NA
DRUM2-1A	<MDA	(2 +/- 9) E+0	<MDA	<MDA	1.5 E+1	6.0 E-1	2.1 E-4	1.9 E-1	NA
DRUM2-1B	(3.0 +/- 0.9) E+1	(1 +/- 4) E+1	<MDA	(3.2 +/- 1.2) E-1	1.5 E+1	4.8 E-1	2.4 E-4	1.7 E-1	NA

[1] Pa-234m is the isotope used to infer the U-238 concentration.
[2] The exposure rate at the drum opening with the lid unattached and attached, respectively.
MDA = Minimum Detectable Activity.

Table 1 - Continued
Gamma Spec Sample Log
Drum Samples
Former EPEC Polymers Facility
Industrial Highway
Fords, Middlesex County, New Jersey

	Radionuclide (pCi/g)							Minimum Detectable Activity (pCi/g)						Exp. Rate[2]
Sample ID	U-235	Pa-234m[1]	Th-234	Ra-226	Pb-214	Bi-214	U-235/Pa-234m	U-235	Pa-234m	Th-234	Ra-226	Pb-214	Bi-214	(uR/hr)
DRM1-20B	(2.3 +/- 0.4) E+0	(9 +/- 2) E+1	(6 +/- 2) E+1	(7 +/- 8) E+0	<MDA	<MDA	0.026	1.4 E-1	2.6 E+1	4.7 E-1	2.3 E+0	4.3 E-1	5.0 E-1	15/13
DRM1-21A	(1.0 +/- 0.7) E+1	(5.7 +/- 0.3) E+2	(4.4 +/- 1.3) E+2	(2.2 +/- 1.3) E+1	<MDA	<MDA	0.018	1.7 E-1	2.8 E+1	8.8 E+0	2.8 E+0	4.40E-01	4.9 E-1	NA
DRM1-23A	US	(6 +/- 3) E+1	(9 +/- 3) E+1	US	(1.5 +/- 0.3) E+0	<MDA	NA	2.2 E-1	4.0 E+1	6.4 E+0	3.6 E+0	4.7 E-1	7.8 E-1	NA

[1] Pa-234m is the isotope used to infer the U-238 concentration.
[2] The exposure rate at the drum opening with the lid unattached and attached, respectively.
US - This nuclide is part of an undetermined solution due to interference with another nuclide.
MDA = Minimum Detectable Activity.

Table 2
Gamma Spec Sample Log
Environmental Samples
Former EPEC Polymers Facility
Industrial Highway
Fords, Middlesex County, New Jersey

	Radionuclide (pCi/g)				Minimum Detectable Activity (pCi/g)			
Sample ID	Pa-234m[1]	Ra-226	Pb-214	Bi-214	Pa-234m	Ra-226	Pb-214	Bi-214
BRICK-1	(1.6 +/- 0.3) E+3	(1 +/- 2) E+3	<MDA	<MDA	8.3 E+1	8.1 E+0	1.5 E-2	1.7 E+0
SLUDGE-2	(7.7 +/- 1.6) E+1	(2 +/- 10) E+1	<MDA	<MDA	1.4 E+1	5.7 E-1	3.3 E-4	1.9 E-1
SLUDGE-3	(1.4 +/- 0.7) E+2	(4 +/- 16) E+1	<MDA	<MDA	9.2 E+1	4.7 E+0	6.6 E-3	1.7 E+0
SLUDGE-7	(4.0 +/- 1.2) E+2	(1 +/- 5) E+2	<MDA	<MDA	1.0 E+2	5.5 E+0	1.4 E-2	1.7 E+0

[1] Pa-234m is the isotope used to infer the U-238 concentration.
MDA = Minimum Detectable Activity.

Table 3
Screening Log
Former EPEC Polymers Facility
Industrial Highway
Fords, Middlesex County, New Jersey

Sreening Location	Average cpm	cpm Range
Trench 1 Soil Surface (after concrete removal)	250	200 - 1,200
Trench 1 Walls (before concrete removal)	600	250 - 2,500
Trench 1 Walls (after concrete removal)	60	40 - 80
Pipe 2 Surface	430	210 - 1,000
Trench 2 Soil Surface (after Pipe No. 2 removal)	540	200 - 1,000
Trench 2 (after removal of 6" of soil)	400	130 - 750
Trench 3 Soil Surface (after Pipe No.1 removal)	680	360 - 1,100
Trench 5 Concrete Surface (before scabbling)	250	200 - 300
Trench 5 Soil Surface (after concrete removal)	100	60 - 120
Pipe 3 Surface	350	220 - 2,000
Trench 5 Soil Surface (after Pipe No. 3 removal)	620	140 - 1,300
Trench 4 Concrete Surface (after brick removal)	740	90 - 1,100

Notes:

All areas screened with the Ludlum 2221 attached to the Ludlum 44-40 probe

Table 4
On-site Visitors for April 1997
Former EPEC Polymers Facility
Industrial Highway
Fords, Middlesex County, New Jersey

Name	Company/Organization	Dates On-site	Purpose of Visit(s)
Brian Dobis	SECOR	1 - 16, 24 - 30	Remediation of radioactive contamination.
Garnet Hatton	SECOR	1 - 16	Remediation of radioactive contamination.
Andrew Schwartz	SECOR	1 - 30	Remediation of radioactive contamination.
David Evans	SECOR	1 - 8, 10 - 13, 15, 16, 21 - 30	Remediation of radioactive contamination.
Jim Johnson	SECOR	9 - 16	Oversight and training.
Ken Sakson	SECOR	25	Remediation of radioactive contamination.
Ravi Gupta	SECOR	1, 2	Remediation of radioactive contamination.
Dale Evans	SECOR	2, 9, 10	Remediation of radioactive contamination.
Roger Towe	EPEC	8	Oversight.
Gerry Malone	EPEC	2, 3, 10, 16, 18, 23, 24, 29, 30	Oversight.
Todd Jackson	USNRC	1, 10, 25	Remediation inspection.
Mariam Tehrani	Akzo-Nobel	2	SECOR Marketing
John Miller	Akzo-Nobel	2	SECOR Marketing
Sam Mark	ESCM	3	Environmental systems maintenance.
Zack Nickell	ESCM	8, 22	Environmental systems maintenance.
Brian Merkley	ESCM	16, 17	Environmental systems maintenance.
Eric Benton	ESCM	17	Environmental systems maintenance.
Ed Shaw	ESCM	8, 18	Environmental systems maintenance.
Jeff Ross	ESCM	17	Environmental systems maintenance.
Bruce Doremus	Doremus Engineering	8	Groundwater monitoring.

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
00	7 8	8 8	9 9	9 10	9 10	10 9	8 8	10 10	10 10	10 9	11 10	10 10	10 10	10 10	10 10	10 10	11 11	11 11	10 10	8 9	10 10	9 10	10 10	10 11	10 10	9 8	8 10	9 10	10 10	9 9	8 8
01	9 9	10 8	10 10	10 9	8 9	9 10	9 10	9 10	11 10	10 9	10 10	11 10	9 9	10 11	10 11	11 11	11 12	9 11	9 9	11 10	10 10	11 11	9 10	10 11	10 10	10 10	9 9	9 9	9 9	9 9	9 9
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03	9 9	9 9	9 9	7 9	9 9	9 8	9 10	9 9	9 10	9 8	8 8	8 8	9 9	8 8	9 9	10 10	9 9	9 10	11 11	10 11	10 10	10 10	10 10	9 9	9 9	10 10	10 10	10 11	9 10	9 10	9 9
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011	10 10	9 9	9 9	9 9	9 11	11 11	11 10	10 10	12 12	10 10	10 11	9 9	10 9	9 9	10 8	9 8	9 10	8 8	9 11	10 11	10 11	10 9	8 7	8 7	9 7	8 9	9 10	10 10	11 10	9 8	9 10
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LEGEND:

8 — SURVEY SCREENING 1–METER ABOVE SURFACE

8 — SURVEY SCREENING AT SUFACE

NOTES:

1. THE BACKGROUND EXPOSURE RATE SURVEY WAS CONDUCTED SOUTH OF THE TRANSFORMER STATION.
2. UNITS ARE IN uR/hr

DWN	SHL
APPR	
DATE	05/07/97
JOB NO.	Z0122-001-01
CAD FILE	CHT-0019

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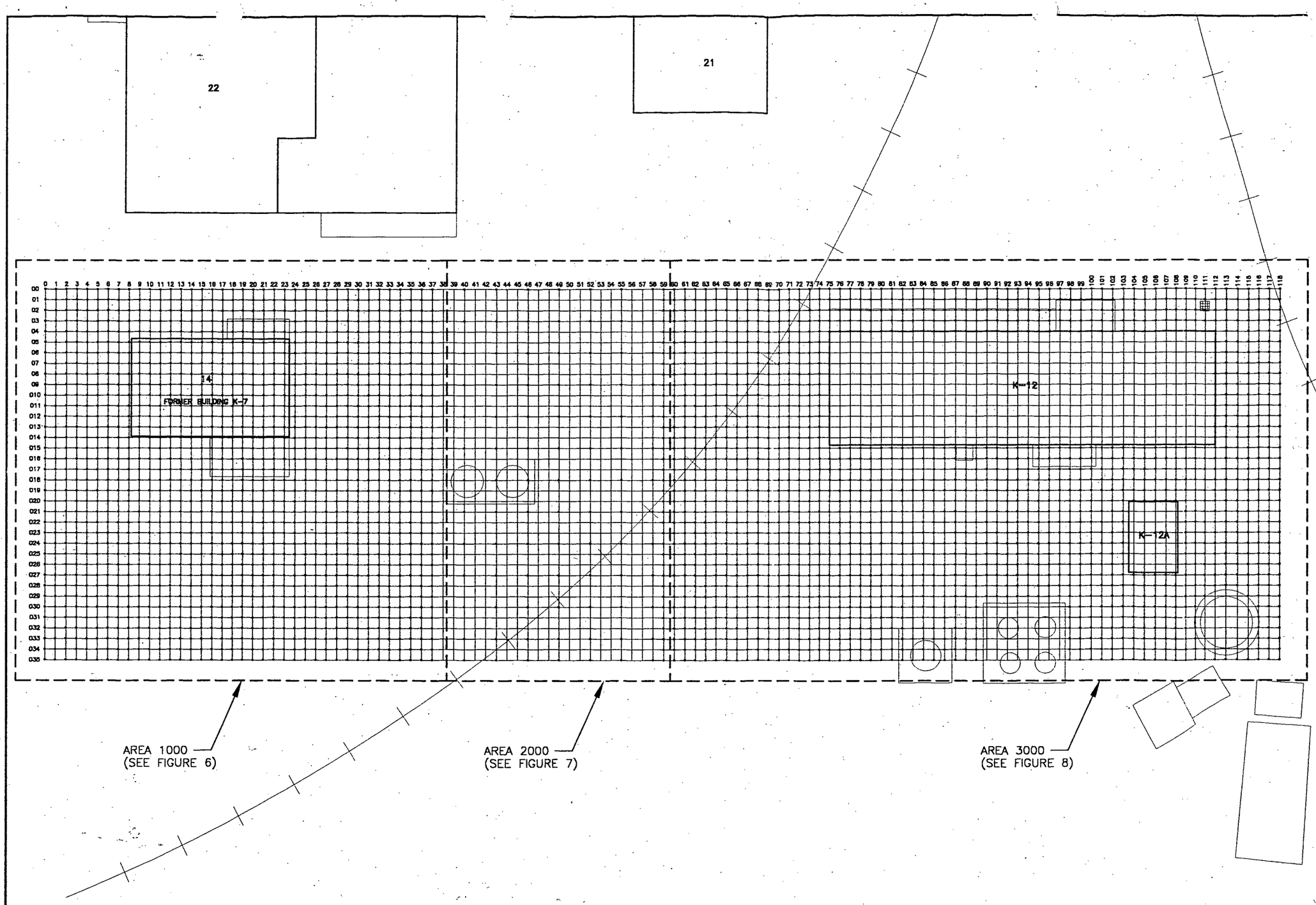
Robbinsville, NJ 08691

EPEC POLYMERS, INC.
Fords, New Jersey

Figure 4
Background Survey



N

0 15 30

SCALE IN FEET

SIGNATURE	DATE
REVIEW ENGR:	
PROJECT ENGR:	
PROJECT MGR:	
CLIENT:	

PREPARED BY:

SECOR INTERNATIONAL INCORPORATED

SECOR

355 UNION BOULEVARD
SUITE 200
LAKEWOOD, COLORADO 80228

PREPARED FOR:

EPEC POLYMERS, INC.

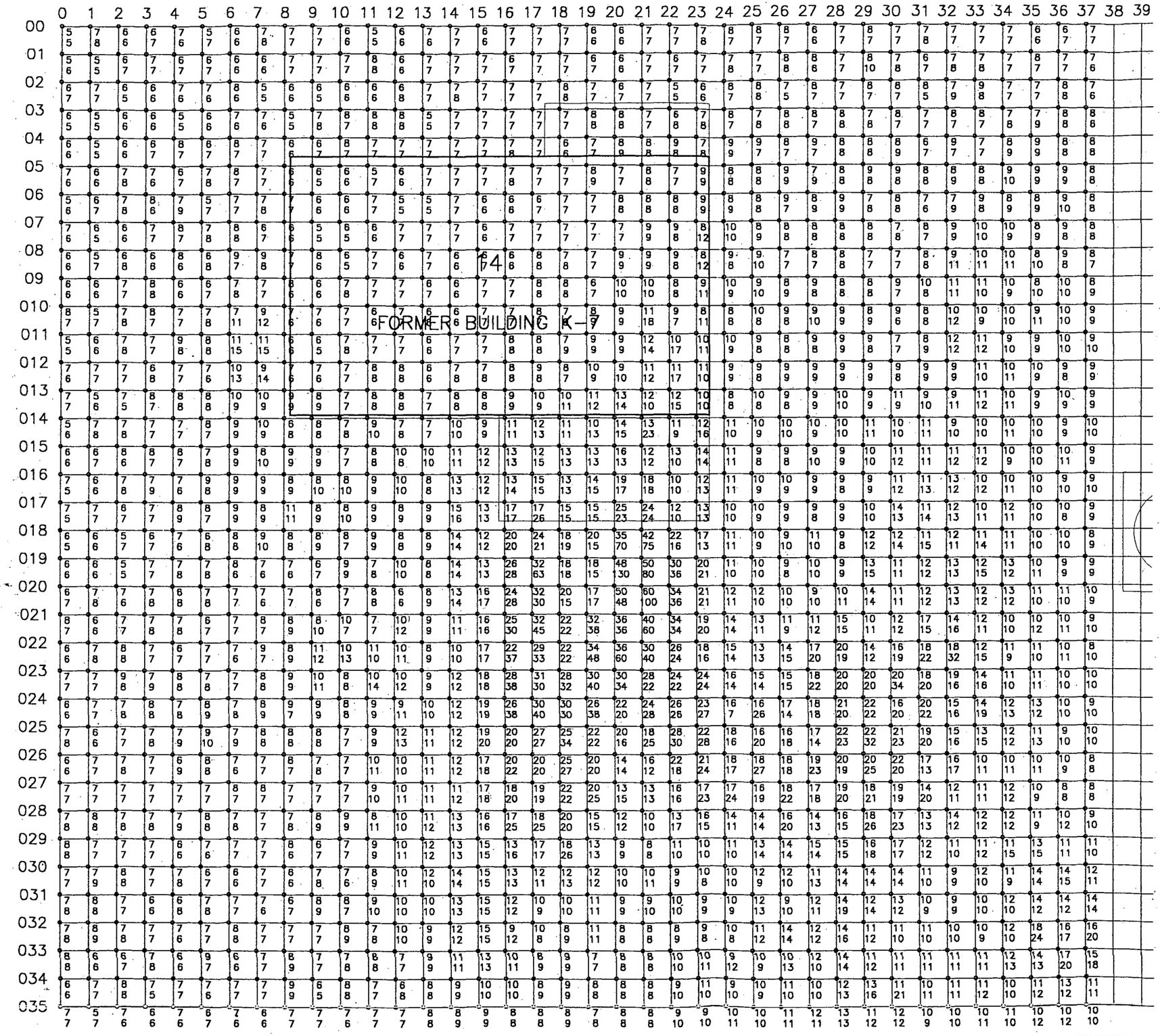
FORDS, NEW JERSEY

OUTDOOR AFFECTED AND POTENTIALLY AFFECTED AREAS

DESIGNED BY:	DETAILED BY:	CHECKED BY:
	SHL	

DATE:	ACAD FILE:
04/11/97	LOC-0499
PROJECT NO.: Z0122-001-01	PLOT SCALE: 1" = 20'

FIGURE 5



LEGEND

8 SURVEY SCREENING 1-METER ABOVE SURFACE

9 SURVEY SCREENING AT SURFACE

UNITS ARE IN uR/hr

N

0 6 12

SCALE IN FEET

SIGNATURE	DATE
REVIEW ENGR:	
PROJECT ENGR:	
PROJECT MGR:	
CLIENT:	

PREPARED BY:

SECOR INTERNATIONAL INCORPORATED

SECOR

355 UNION BOULEVARD
SUITE 200
LAKEWOOD, COLORADO 80228

PREPARED FOR:

EPEC POLYMERS, INC.

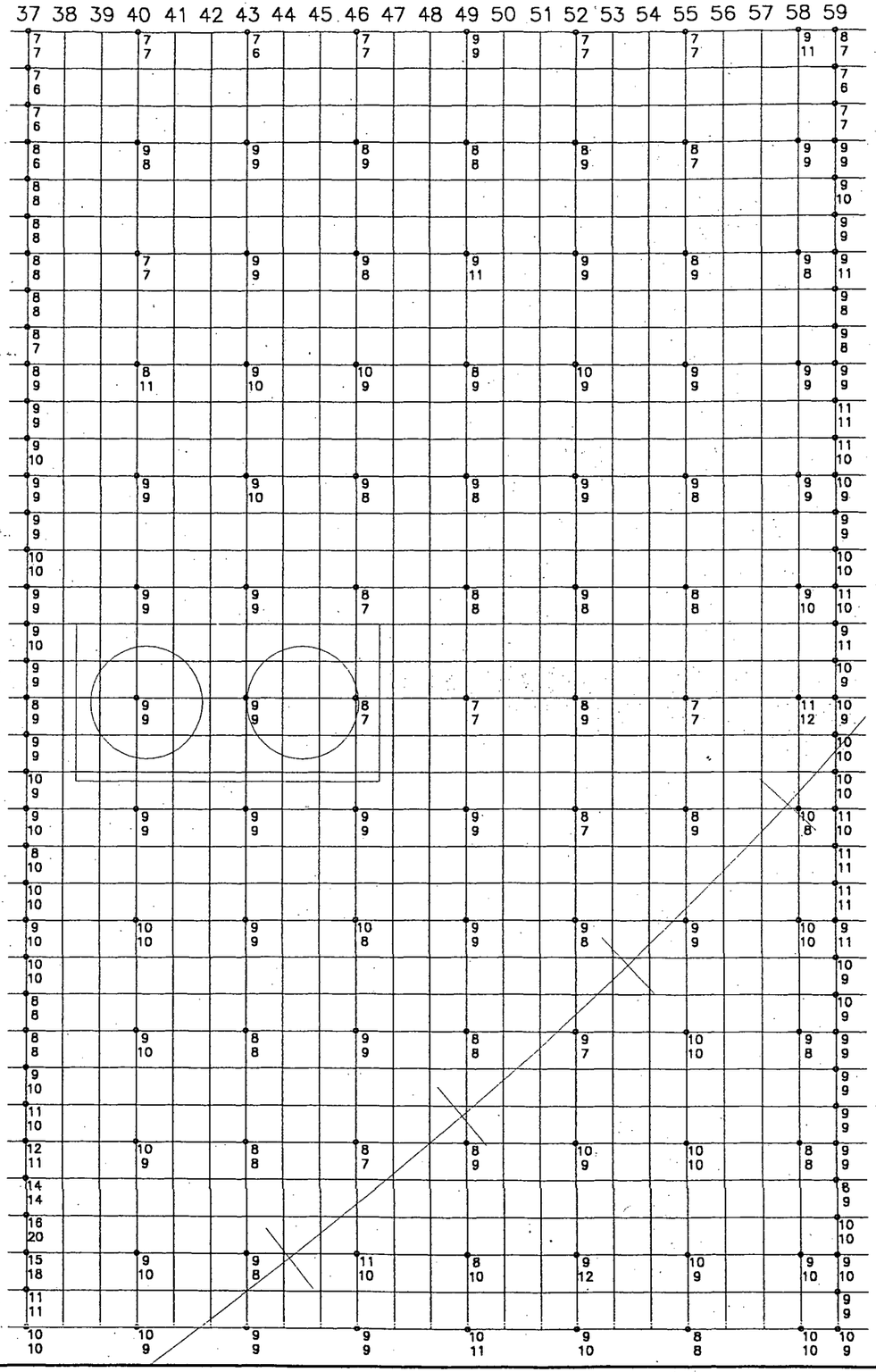
FORDS, NEW JERSEY

AREA 1000
INITIAL EXPOSURE RATE SURVEY

DESIGNED BY:	DETAILED BY:	CHECKED BY:
	SHL	

DATE:	ACAD FILE:
05/06/97	LOC-0500
PROJECT NO.: Z0122-001-01	PLOT SCALE: 1" = 20'

FIGURE 6



LEGEND

8 — SURVEY SCREENING 1-METER ABOVE SURFACE

8 — SURVEY SCREENING AT SURFACE

UNITS ARE IN uR/hr

N

0 6 12

SCALE IN FEET

SIGNATURE	DATE
REVIEW ENGR:	
PROJECT ENGR:	
PROJECT MGR:	
CLIENT:	

PREPARED BY:

SECOR INTERNATIONAL INCORPORATED

SECOR

355 UNION BOULEVARD
SUITE 200
LAKEWOOD, COLORADO 80228

PREPARED FOR:

EPEC POLYMERS, INC.

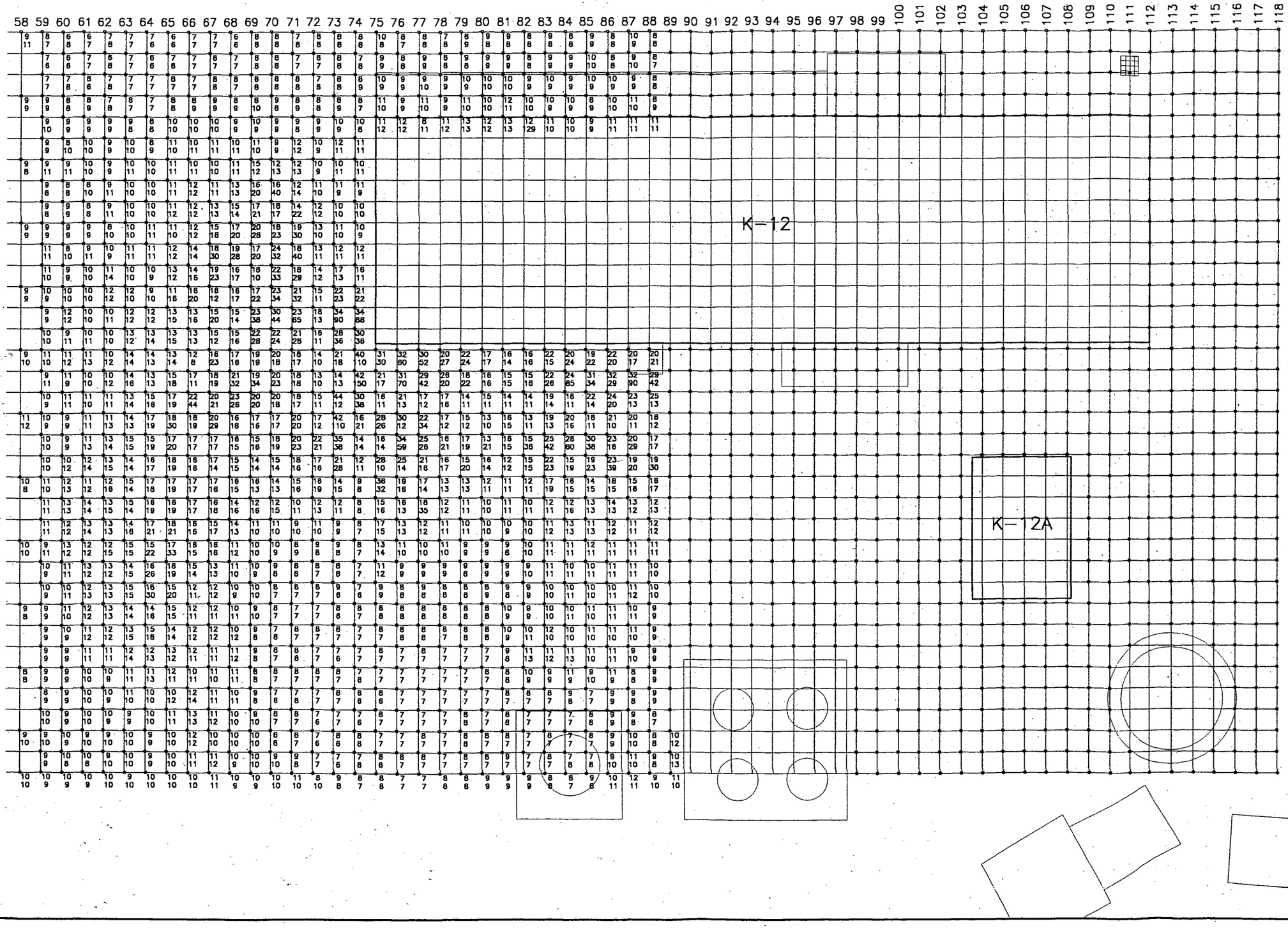
FORDS, NEW JERSEY

AREA 2000
INITIAL EXPOSURE RATE SURVEY

DESIGNED BY:	DETAILED BY:	CHECKED BY:
	SHL	

DATE:	ACAD FILE:
05/06/97	LOC-0501
PROJECT NO.: Z0122-001-01	PLOT SCALE: 1" = 20'

FIGURE 7



LEGEND

8 — SURVEY SCREENING 1-METER ABOVE SURFACE

9 — SURVEY SCREENING AT SURFACE

UNITS ARE IN uR/hr

N

0 7.5 15

SCALE IN FEET

SIGNATURE	DATE
REVIEW ENGR:	
PROJECT ENGR:	
PROJECT MGR:	
CLIENT:	

PREPARED BY:

SECOR INTERNATIONAL INCORPORATED

SECOR

356 UNION BOULEVARD
SUITE 200
LAKEWOOD, COLORADO 80226

PREPARED FOR:

EPEC POLYMERS, INC.

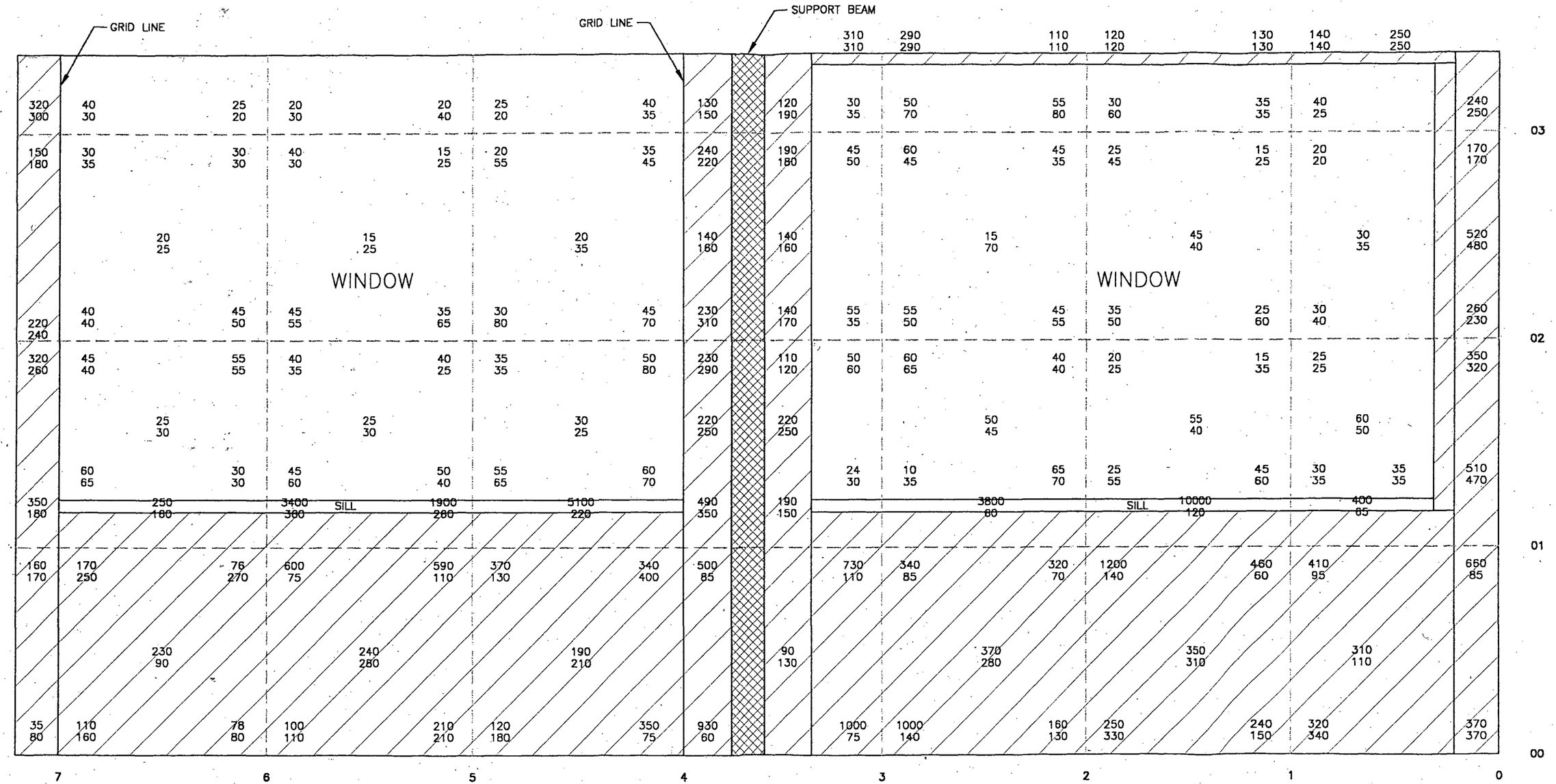
FORDS, NEW JERSEY

AREA 3000
INITIAL EXPOSURE RATE SURVEY

DESIGNED BY:	DETAILED BY:	CHECKED BY:
	SHL	

DATE:	ACAD FILE:
05/07/97	LOC-0502
PROJECT NO.: Z0122-001-01	PLOT SCALE: 1" = 20'

FIGURE 8



LEGEND

40 INITIAL SURVEY
30 FINAL SURVEY

BRICK

NOTE: UNITS ARE IN COUNTS PER MINUTE (CPM)

0 0.5 1.0
SCALE IN METERS

DWN	SHL
APPR	
DATE	05/06/97
JOB NO.	Z0122-001-01
CAD FILE	DET-0104

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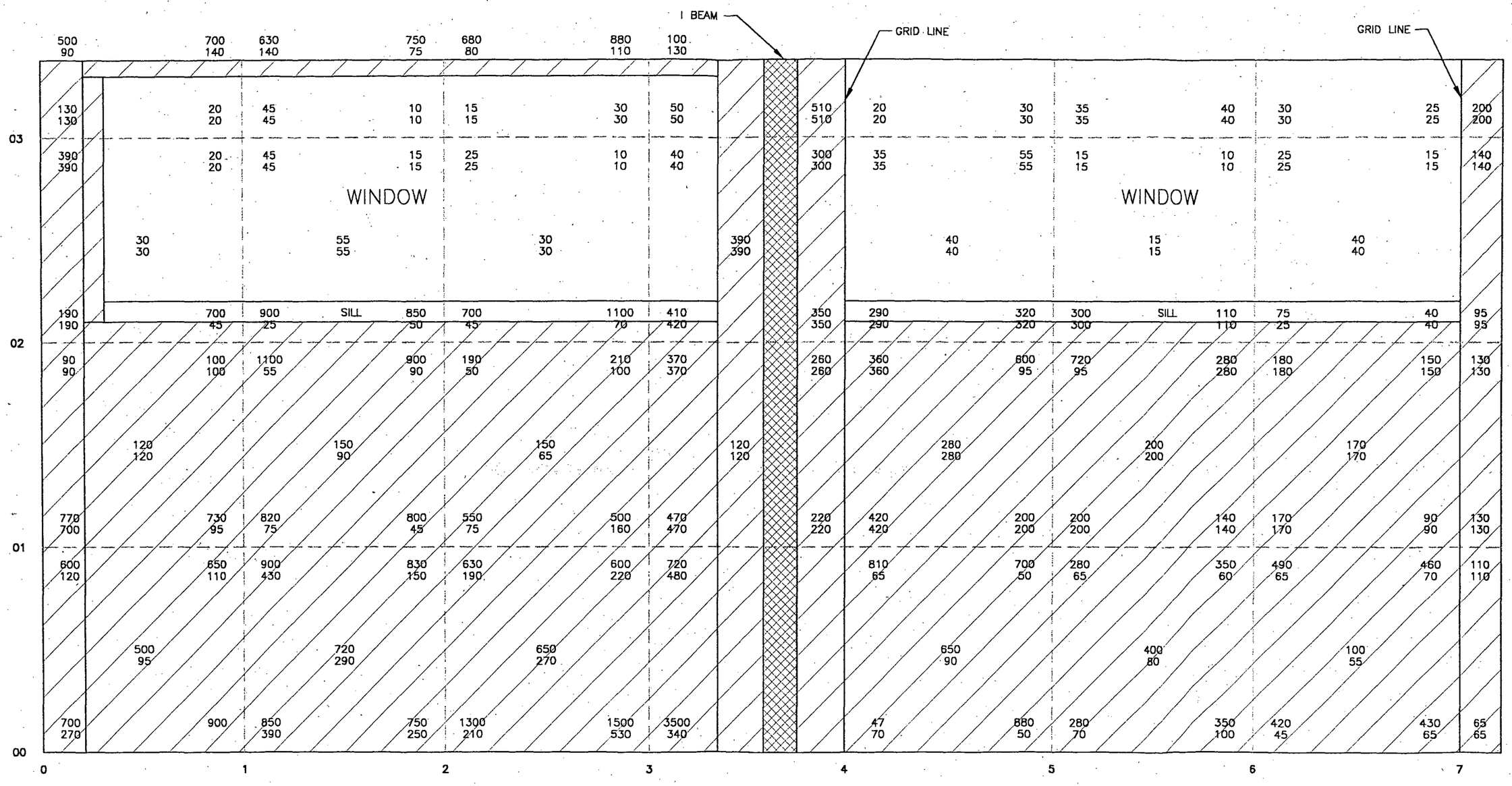
Fords, New Jersey

Figure 9
South Wall Catalyst Preparation Room



LEGEND

40 INITIAL SURVEY
30 FINAL SURVEY

BRICK

NOTE: UNITS ARE IN COUNTS PER MINUTE (CPM)

0 0.5 1.0
SCALE IN METERS

DWN	SHL
APPR	
DATE	05/06/97
JOB NO.	Z0122-001-01
CAD FILE	DET-0105

SECOR
111-A North Gold Drive
Robbinsville, NJ 08691

EPEC
POLYMERS, INC.
Fords, New Jersey

Figure 10
North Wall Catalyst Preparation Room