

May 1, 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: February 7 through February 28, 1997
Former Tenneco Polymers Facility Located at
Industrial Avenue, Fords, New Jersey

Dear Dr. Bellamy:

During the month of February 1997, SECOR International Inc. (*SECOR*) initiated radioactive decommissioning work at the former Tenneco Polymers facility located at Industrial Avenue in Fords, New Jersey. Work performed during February has focused on mobilization to the site and set-up, as well as screening of background and affected areas. A summary of these activities is provided as follows:

Site Mobilization:

- All site workers were given the 8 hour Radiation Control Training Course on February 7, 1997 at *SECOR*'s Trenton, New Jersey office. The training was provided by Dr. James E. Johnson, C.H.P., from Colorado State University. Dr. Johnson's credentials were provided with the Work Plan previously submitted.
- Construction, remediation, and support equipment required for remediation activities were delivered to the site.
- Site operations were organized to manage areas with known impacts in and around Building K-7, K-12, and K-12A as shown on Figure 1.
- On-site laboratory and office equipment was set-up in Building 56S. The laboratory equipment consists of a gamma spectroscopy system, field instruments, and sample preparation equipment.

- The power and lights were connected in Building 31 to support onsite operations. A segregation and waste screening room was set-up and waste storage and clean soil stockpile areas were delineated in Building 31 subsequent to an initial background screening.
- Low power lines were raised so that they will not interfere with site activities and the health and safety of site workers.
- Boards were placed over the windows on all floors in Building K-12 to prevent precipitation from entering excavations and spreading contamination during remediation. A worker decontamination area was constructed on the east end of the building to prevent contamination from spreading to other areas of the site.
- A temporary roof was constructed inside of Building K-12A to keep precipitation out of excavations and prevent spreading contamination during remediation.
- Exclusion zones were constructed around affected and potentially affected areas. Identification of the exact configuration of impacted locations during site screening, surveys, and remediation will be performed.

Site Surveys and Screening:

- A gamma exposure rate survey of Building 31 (waste storage area for *SECOR's* remediation activities) was performed with the results indicated on Figure 2. This survey was conducted to ensure that the building was not impacted by radioactive materials prior to remediation activities.
- Ludlum Model 19 gamma exposure rate meters were cross-calibrated to ensure that measurements made with both instruments are consistent. Table 1 provides gamma exposure rate readings for each instrument from 13 different on-site locations and the ratios of these readings. The cross-calibration data shows that the instruments are in close agreement.
- Miscellaneous wood and metal debris was screened and moved out of potentially affected areas. Table 2 provides the results of screening and removal of debris in Building K-12. The debris was found to be indistinguishable from background and moved to Building 31 for storage as clean waste.
- A 1-square meter grid system was established on the floors and lower walls of Building K-12 and K-12A. Figure 3 indicates the results of the initial gamma exposure rate surveys that were conducted for these buildings.
- A 1-square meter grid system was established for the affected outdoor areas while a 3-square meter grid system was established for the potentially affected outdoor area between and including Building K-12 and the foundation of Building K-7 (see Figure 4).
- The area of the site to be used for the background survey was identified and delineated south of the transformer station.

- Table 3 provides results of gamma spectroscopy analysis of 6 soil samples and 1 vegetative sample from the area south of the Building K-7 foundation (V-1); 2 samples of sweepings (SWEEP-1 and SWEEP-2), 1 debris sample (DEBRIS-1), and 1 moss samples (MOSS-1) collected from the Catalyst Preparation Room; and, 1 sample of sweepings (SWEEP-3) and 1 debris sample (DEBRIS-2) collected from the Converter Room. Samples that have been collected and prepared but not analyzed include 1 vegetative sample from the area south of the Building K-7 foundation (V-2), 2 samples of sweepings from the Converter Room (SWEEP-4 and SWEEP-5), and 2 moss samples (MOSS-2 and MOSS-3) from the Catalyst Preparation Room. The analysis of these samples will be included in the report for March 1997.
- Gamma exposure rate surveys were performed for unaffected Buildings 41, 53, and 59 (see Figure 1 for building locations). The readings in these buildings are typical background readings for indoor areas of the facility.

Nine gamma exposure rate readings were collected in Building 41 at 1 meter above the floor surface and on contact with the floor surface. Readings ranged from 11 to 15 $\mu\text{R/hr}$. The average reading at the floor surface was 12 $\mu\text{R/hr}$ and the average reading at a height of 1 meter was 13 $\mu\text{R/hr}$.

Six gamma exposure rate readings were collected in Building 53 at 1 meter above the floor surface and in near contact with the floor surface. Readings ranged from 10 to 14 $\mu\text{R/hr}$. The average reading at the floor surface was 12 $\mu\text{R/hr}$ and the average reading at a height of 1 meter as 12 $\mu\text{R/hr}$.

One-hundred sixty gamma exposure rate readings were collected in Building 59 at 1 meter above the floor surface and in near contact with the floor surface. These readings ranged from 4 to 14 $\mu\text{R/hr}$. The average reading at the floor surface was 7 $\mu\text{R/hr}$ while the average reading at 1 meter was also 7 $\mu\text{R/hr}$. There was only one location that exhibited gamma exposure rates above the building's background. A pallet of potassium chloride salt measured 14 $\mu\text{R/hr}$ at 1 meter and in near contact. The elevated radiation levels in the area of the salt pallet are probably due to the natural K-40 in the salt.

Removal Activities:

- Bird droppings, dust, and debris were removed from Buildings K-12, K-12A, and 31, subject to materials handling and health and safety protocols in the Work Plan.
- Weeds from the impacted outdoor area between Building K-12 and former Building K-7 were removed and placed in drum liners. The vegetative materials generated consisted of only those materials above the ground surface. Screening of these materials with the onsite gamma spectroscopy system indicated no concentrations of radionuclides in excess of cleanup criteria.

Materials Handling:

- Bird droppings, dust, and debris from Buildings K-12 and K-12A were transported in buckets by hand to Building 31 and stored in lined drums. Bird droppings, dust, and debris from Building 31 was placed directly into lined drums. The material will be stored in drums until a gamma spectroscopy analysis is performed on the contents of the drums.

Site Visitors:

- Table 4 provides a list of people that have visited the site and the purpose of the visit.


Future Plans:

Activities that will be performed in March include:

- A gamma exposure rate survey of the background area and the affected and potentially affected outdoor areas to determine the areas that need remediation.
- Removal and packaging of impacted soil, concrete, and other construction materials.

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

Sincerely,
SECOR International Inc.


Ravi Gupta
Principal-In-Charge

Attachments

c: Project File
R. Towe, EPEC Polymers
T. Jackson - USNRC
P. Lazaar - SECOR

FIGURES AND TABLES

Figures:

1	Site Plan
2	Exposure Rate Survey of Building 31
3	Exposure Rate Survey of Buildings 12 and 12A
4	Grid of Affected and Potentially Affected Outdoor Areas

Tables:

1	Cross Calibration of Ludlum Model 19 μ R-Meters
2	Screening Results of Debris in Building 12
3	Gamma Spec Sample Results
4	On-site Visitors for February 1997

Table 1
 Cross Calibration of Ludlum Model 19 uR-Meters
 Former Tenneco Polymers Site
 Industrial Avenue
 Fords, New Jersey

CSU Unit (uR/hr)	SECOR Unit (uR/hr)	Ratio (SECOR/CSU)
8.0	9.2	1.15
11.8	12.7	1.08
30.0	31.6	1.05
7.0	6.0	0.86
38.5	41.3	1.07
32.5	35.0	1.08
22.0	26.0	1.18
58.0	59.0	1.02
10.0	11.7	1.17
11.0	10.9	0.99
10.0	10.9	1.09
52.0	56.0	1.08
9.5	10.0	1.05
		Mean - 1.07

Table 2
Screening of Debris in Building 12
Former Tenneco Polymers Site
Industrial Avenue
Fords, New Jersey

Debris ID	44-40 Probe ¹	44-2 Probe ²
Red Pipe	<MDA	<MDA
Styrofoam Block	<MDA	<MDA
Steel Stand	<MDA	<MDA
Box of Rusty Cans	<MDA	<MDA
Steel Rod	<MDA	<MDA
Pallet	<MDA	<MDA
Fan Housing	<MDA	<MDA
Pipes/Wood/Wires	<MDA	<MDA
Hoses (1" and 2")	<MDA	<MDA
Floor Plate 1	<MDA	<MDA
Floor Plate 2	<MDA	<MDA
Floor Plate 3	<MDA	<MDA
Floor Plate 4	<MDA	<MDA
Floor Plate 5	<MDA	<MDA
Floor Plate 6	<MDA	<MDA
Floor Plate 7	<MDA	<MDA

¹ Ludlum 44-40 probe attached to a Ludlum 2221.

² Ludlum 44-2 probe attached to a Ludlum 2221.

MDA = Minimum Detectable Activity

Table 3
Gamma Spec Sample Log
Former Tenneco Polymers Site
Industrial Avenue
Fords, New Jersey

Sample ID	Radionuclide (uCi/g)				Minimum Detectable Activity (uCi/g)				Exp. Rate (uR/hr)
	Pa-234m ¹	Ra-226	Pb-214	Bi-214	Pa-234m	Ra-226	Pb-214	Bi-214	
ISS-1	(1.0 +/- 0.2) E-3	(3 +/- 11) E-4	(5 +/- 6) E-7	(6 +/- 4) E-7	3.8 E-5	2.8 E-6	3.8 E-7	5.3 E-7	21
ISS-2	(3.6 +/- 0.7) E-4	(1 +/- 5) E-4	(6 +/- 8) E-7	(7 +/- 3) E-7	3.1 E-5	2.0 E-6	3.1 E-7	4.0 E-7	15
ISS-3 ²	<MDA	<MDA	(4 +/- 5) E-7	(6 +/- 3) E-7	4.1 E-5	1.6 E-6	2.1 E-7	3.7 E-7	10
ISS-4	(1.8 +/- 0.8) E-5	(7 +/- 30) E-6	(2 +/- 3) E-7	(3.6 +/- 1.2) E-7	1.2 E-5	5.6 E-7	6.8 E-8	1.6 E-7	8
ISS-5	(3.1 +/- 1.0) E-5	(1 +/- 4) E-5	(2 +/- 2) E-7	(2.3 +/- 1.2) E-7	1.3 E-5	6.7 E-7	8.1 E-8	1.7 E-7	11
ISS-6	<MDA	<MDA	(4 +/- 5) E-7	(7 +/- 2) E-7	2.3 E-5	1.1 E-6	8.6 E-8	2.4 E-7	6
SWEEP-1	(9.4 +/- 1.6) E-4	(3 +/- 13) E-4	<MDA	(2 +/- 2) E-7	2.3 E-5	1.5 E-6	2.7 E-7	3.1 E-7	23
SWEEP-2	(1.2 +/- 0.2) E-3	<MDA	<MDA	<MDA	4.8 E-5	3.7 E-6	6.5 E-7	8.4 E-7	34
SWEEP-3	(4.0 +/- 0.7) E-4	(1 +/- 4) E-4	<MDA	<MDA	2.0 E-5	1.4 E-6	2.3 E-7	3.4 E-7	13
DEBRIS-1	(2.6 +/- 0.4) E-3	(8 +/- 30) E-4	<MDA	(5 +/- 5) E-7	4.6 E-5	4.4 E-6	6.9 E-7	6.2 E-7	24-55
DEBRIS-2	(7.1 +/- 1.2) E-4	(2 +/- 7) E-4	<MDA	<MDA	1.2 E-5	8.9 E-7	1.4 E-7	1.9 E-7	39-60
MOSS-1	(7 +/- 2) E-4	(3 +/- 12) E-4	<MDA	<MDA	1.5 E-4	8.4 E-6	1.3 E-6	2.6 E-6	17

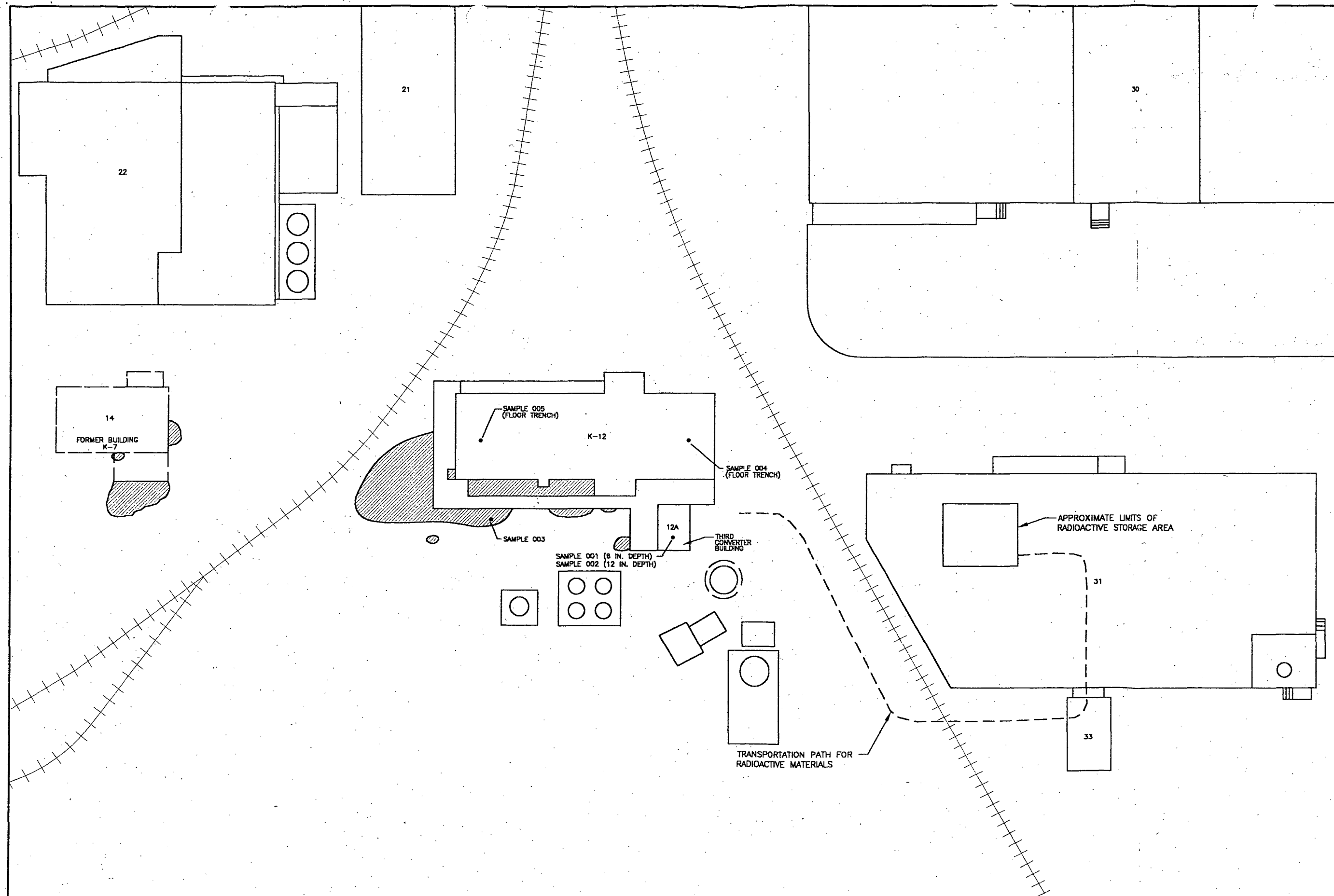
¹ Pa-234m is the isotope used to infer the U-238 concentration.

² ISS-3 will be recounted for a longer period of time to lower the minimum detectable activity.

MDA = Minimum Detectable Activity.

Table 4
On-site Visitors for February 1997
Former Tenneco Polymers Site
Industrial Avenue
Fords, New Jersey

Name	Company/Organization	Dates On-site	Purpose of Visit(s)
Dale Evans	SECOR	8 - 11	Remediation of radioactive contamination.
Jimmy Davis	SECOR	8 - 27	Remediation of radioactive contamination.
Brian Dobis	SECOR	8 - 28	Remediation of radioactive contamination.
Garnet Hatton	SECOR	8 - 28	Remediation of radioactive contamination.
Andrew Schwartz	SECOR	8 - 28	Remediation of radioactive contamination.
David Evans	SECOR	9, 27	Remediation of radioactive contamination.
Ravi Gupta	SECOR	10, 25	Remediation of radioactive contamination.
Chris Mack	SECOR	11 - 20, 24, 27	Remediation of radioactive contamination.
Jim Johnson	SECOR	8 - 11	Oversight and training.
Ken Sakson	SECOR	24, 28	Remediation of radioactive contamination.
Roger Towe	EPEC	10, 11	Oversight.
Gerry Malone	EPEC	11, 12, 20, 21, 26, 27	Oversight.
Todd Jackson	USNRC	10, 25	Inspection.
James Collins	Canberra	11	Installation of gamma spec.
Sam Mark	ESCM	12	Environmental systems maintenance.
Jeff Ross	ESCM	19, 20	Environmental systems maintenance.
Zack Nickell	ESCM	19, 20	Environmental systems maintenance.
Brian Merkley	ESCM	26	Environmental systems maintenance.
Drew DiGirolamo	DiGirolamo	18	Removal of waste oil from air compressors.
B. McCally	Hertz	18	Delivery of Bobcat.
Bill Wunnenberg	D.C. Piano	19 - 24	Electrical work.
Larry Jerosiewicz	D.C. Piano	24	Electrical work.
Joseph Raccuia	D.C. Piano	24	Electrical work.
Bruce Doremus	Doremus Engineering	28	Groundwater monitoring.

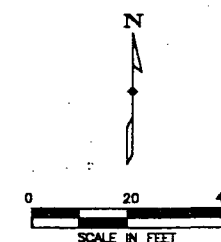


LEGEND

- SECOR PRELIMINARY FIELD INVESTIGATION, SOIL SAMPLE LOCATION AND DESIGNATION.
- AREA WITH SURFACE SOILS HAVING GAMMA EXPOSURE READINGS GREATER THAN 10 μ R/HR ABOVE BACKGROUND READINGS BASED ON SECOR PRELIMINARY FIELD INVESTIGATION.

NOTE:

DEVELOPED FROM ESCM CONSULTING ENGINEERS, DRAWING NO. TNFD-0001 DATED 3/16/92 AND HEYDEN NEWPORT CHEMICAL CORP. DRAWING FILE 11147-9 DATED 9/1/60.



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

PREPARED BY:
SECOR INTERNATIONAL INCORPORATED

SECOR

355 UNION BOULEVARD
SUITE 200
LAKEWOOD, COLORADO 80228

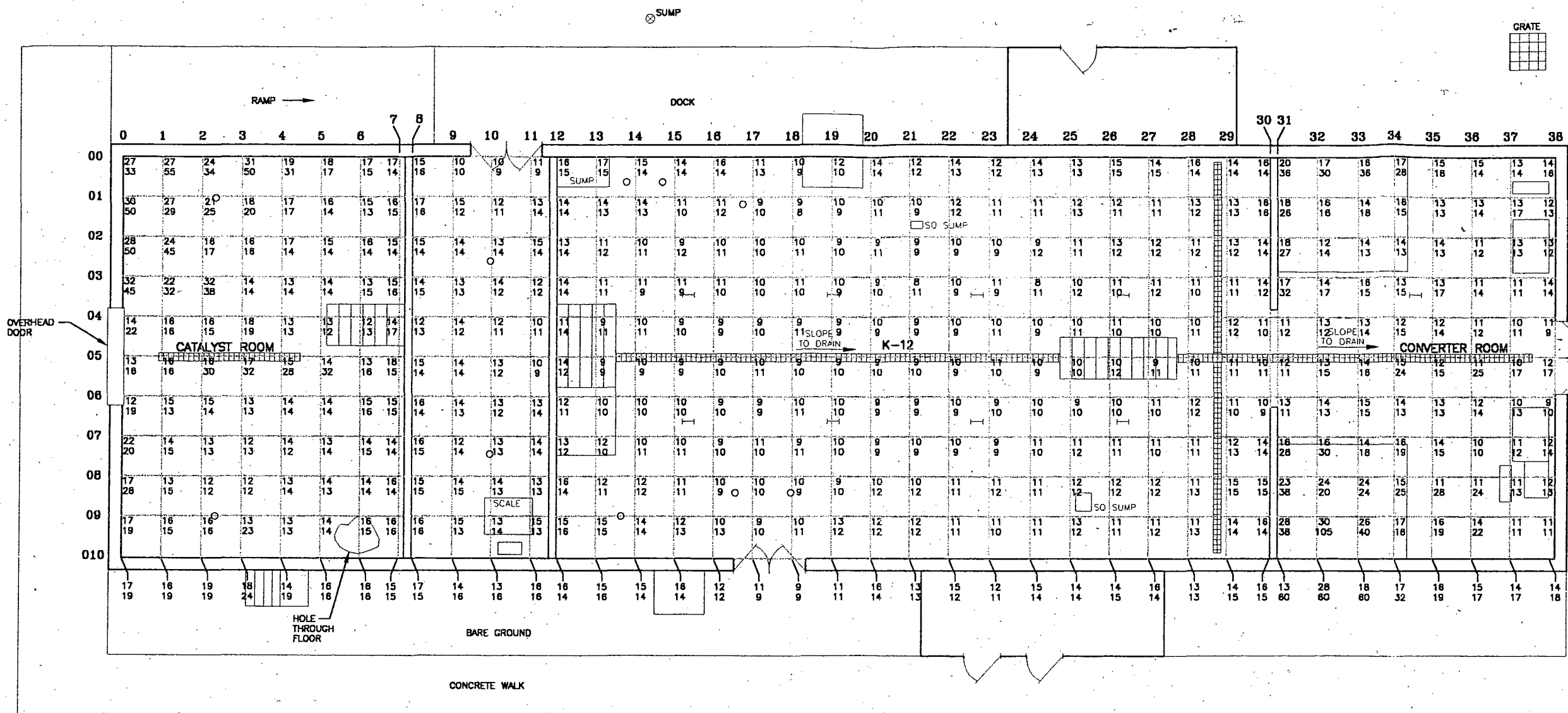
PREPARED FOR:
TENNECO, INC.
HOUSTON, TEXAS

FORDS, NEW JERSEY

SITE PLAN

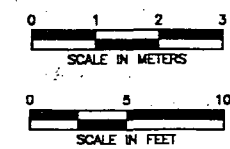
DESIGNED BY: T. KREUTZ	DETAILED BY: SHL	CHECKED BY:
DATE: 03/11/97	ACAD FILE: SLM-0420	
PROJECT NO: B0700-001-01	PLAT SCALE: 1" = 20'	

FIGURE 1



- LEGEND**
- 14 READING 1 METER ABOVE FLOOR
 - 14 READING AT SURFACE
 - [Grid Symbol] FLOOR DRAIN (8" WIDE x 5" DEEP)
 - [Line Symbol] STEEL COLUMNS
 - [Circle Symbol] FLOOR DRAIN

- NOTES:**
1. ALL MEASUREMENTS TAKEN WITH A LUDLUM MODEL 19, CALIBRATED ON 1/21/97.
 2. ALL MEASUREMENTS ARE IN uR/Hr.



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

PREPARED BY: SECOR INTERNATIONAL INCORPORATED SECOR 355 UNION BOULEVARD SUITE 500 LAKEWOOD, COLORADO 80226 PREPARED FOR: TENNECO, INC. HOUSTON TEXAS FORDS, NEW JERSEY EXPOSURE RATE SURVEY OF BUILDINGS 12 AND 12A		
DESIGNED BY:	DETAILED BY:	CHECKED BY:
DATE:	ACAD FILE:	
02/21/97	CHT-0017	
PROJECT NO.:	PLOT SCALE:	
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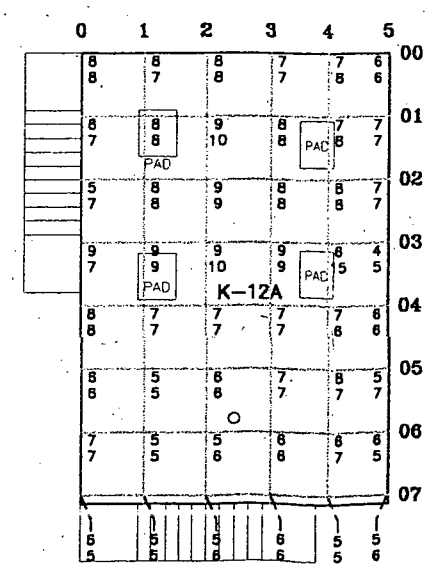
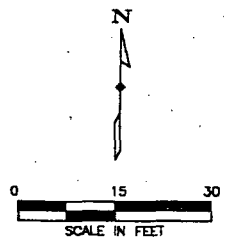
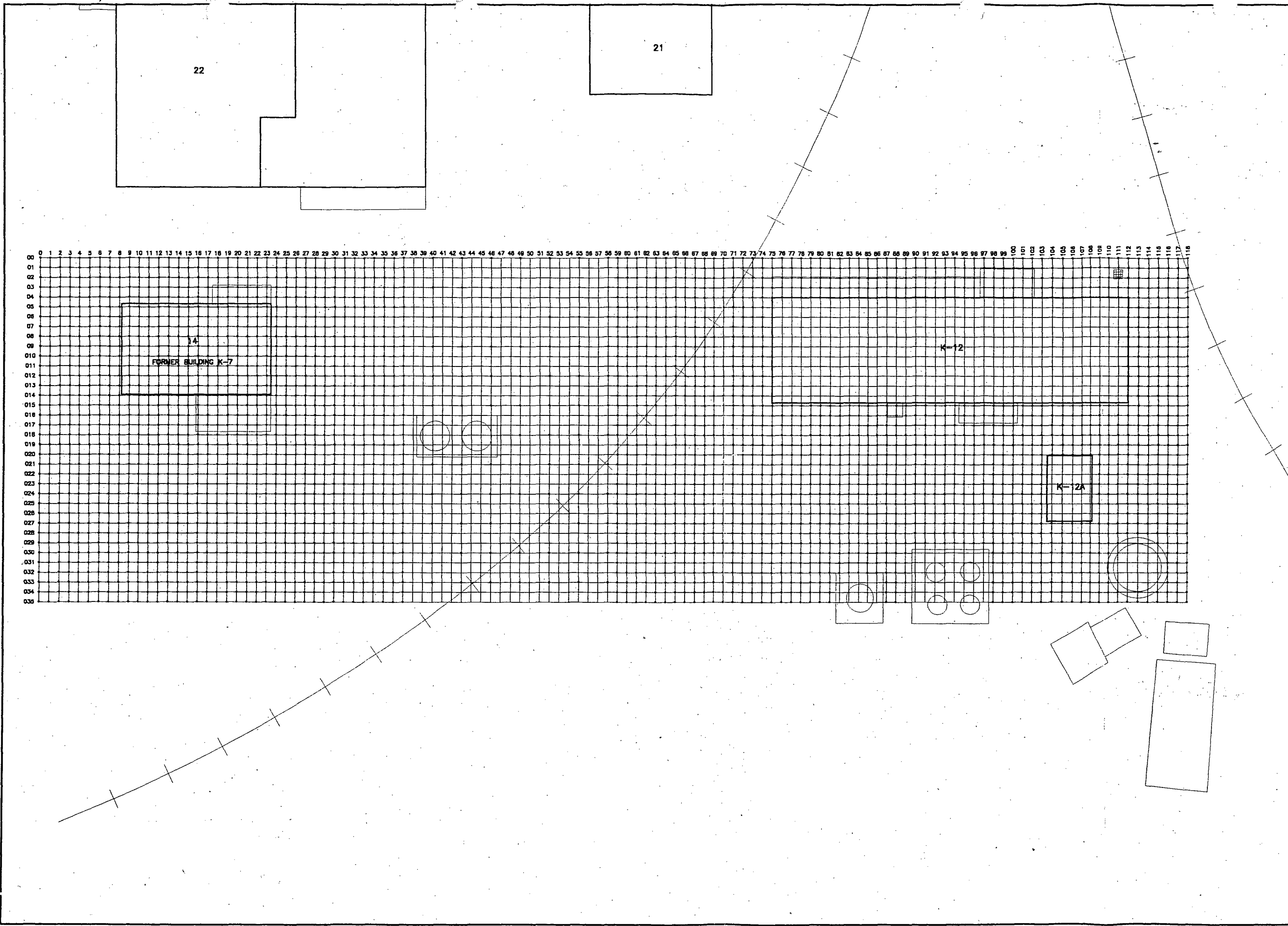


FIGURE 3



SIGNATURE		DATE
REVIEW ENGR:		
PROJECT ENGR:		
PROJECT MGR:		
CLIENT:		
PREPARED BY: SECOR INTERNATIONAL INCORPORATED SECOR 355 UNION BOULEVARD SUITE 200 LAKEWOOD, COLORADO 80226		
PREPARED FOR: TENNECO, INC. HOUSTON, TEXAS FORDS, NEW JERSEY		
GRID OF AFFECTED AND POTENTIALLY AFFECTED OUTDOOR AREAS		
DESIGNED BY:	DETAILED BY:	CHECKED BY:
	SHL	
DATE:	ACAD FILE:	
03/06/97	BAS-0405	
PROJECT NO.:	PLOT SCALE:	
20100-001-01	1" = 20'	
FIGURE 4		