AmerGen Energy Company
Oyster Creek
US Route 9 South, P.O. Box 388
Forked River, NJ 08731-0388

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72-15

October 10, 2005
2130-05-20199

The Honorable Gary Quinn
Mayor, Lacey Township
818 West Lacey Road
Forked River, NJ 08731

Subject: Oyster Creek Generating Station
Independent Spent Fuel Storage Installation Annual Report

Reference: Building Permit; Appeal 93-40 (after remand)

Conditions ten and eleven of the above referenced building permit require the Oyster Creek Generating Station to submit two routine reports to Lacey Township on an annual basis. Enclosure I to this letter fulfills the reporting requirements for the year 2005.

If any further information or assistance is needed, please contact William Stewart at 609-971-4775.

Sincerely,

C. N. Swenson
Vice President, Oyster Creek Generating Station

CNS/WVS
Enclosure

cc: USNRC Document Control Desk; Docket 72-15
S. J. Collins, Administrator, USNRC Region I
P. S. Tam, USNRC Senior Project Manager, Oyster Creek
R. J. Summers, USNRC Senior Resident Inspector, Oyster Creek
File No. 05006

NMSS01

Enclosure I

Independent Spent Fuel Storage Installation (ISFSI) Building Permit Condition Ten:

"The applicant shall provide to the township on a yearly basis, written records revealing all temperature and radiation measurements. The applicant shall further advise of any and all repairs made to the concrete modules."

Oyster Creek Generating Station Reply to Condition Ten:

The temperatures of the loaded concrete storage modules are monitored daily and are part of the stations surveillance records. The temperature of the loaded modules runs 18-33 degrees higher than the unloaded modules depending on the heat load of the spent fuel loaded. On a typical summer sunny day, the highest concrete storage module temperatures read about 120 degrees. This is well within the design limits of the modules and represents an actual heat loading of about 7.5 KW

Attachment I to this Enclosure provides the graphs of the actual temperature data for the period from October 27, 2004 to Sept 30, 2005, for the modules we loaded in 2002 (# 1-4), the modules we loaded in April - May of 2003 (# 4-8), the modules we loaded in 2004 (# 9-11), and the modules we loaded in 2005 (# 12-16). Modules 17 & 18 being new units, have no temperature data before May 2004. The temperature instrumentation on these units was installed and made operational just before Module 11 was loaded in May 2004. Modules #17 and #18 are currently empty and their indicated temperature is provided for comparison.

The highest radiation measurements on the vertical face of the Horizontal Storage Modules (HSM) are 2.4 mr/hr gamma and 1.6 mr/hr neutron. The highest radiation measurements on the roof of the HSMs are 22 mr/hr gamma and 1.0 mr/hr neutron. (The roof of the HSMs is not a readily accessible area.) These readings are well within the design limits of the modules and are decreasing with time. The highest radiation level at the ISFSI security fence facing Route 9 was calculated to be 0.012 mr/hr based on integrated radiation dose during the first six months of 2005. Additional radiation survey data is enclosed.

There were no repairs to the concrete modules in the last year.

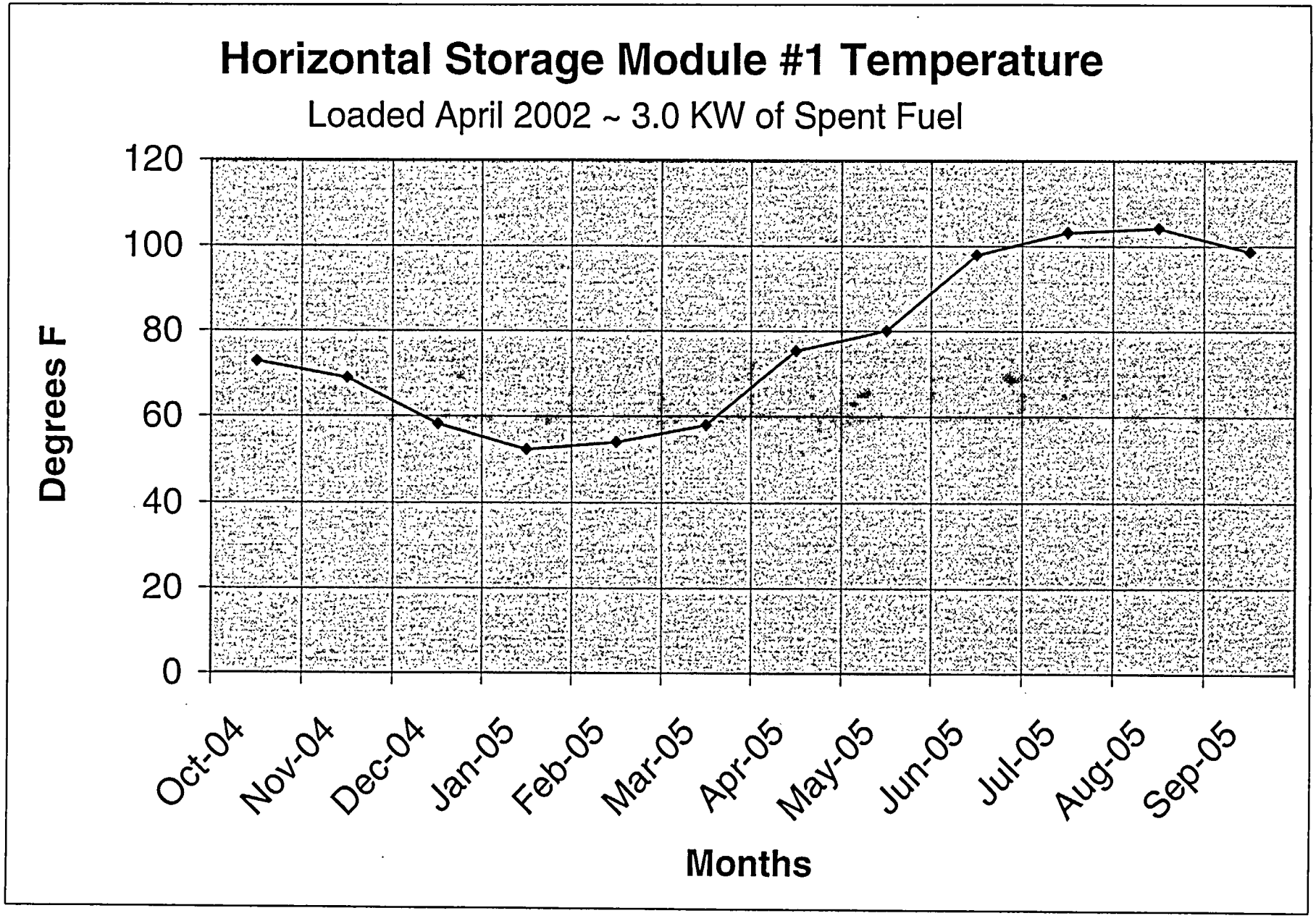
New Horizontal Storage Modules 11-18 were installed in the fall of 2003 and 12-16 were loaded in 2005. Modules 17 and 18 remain empty.

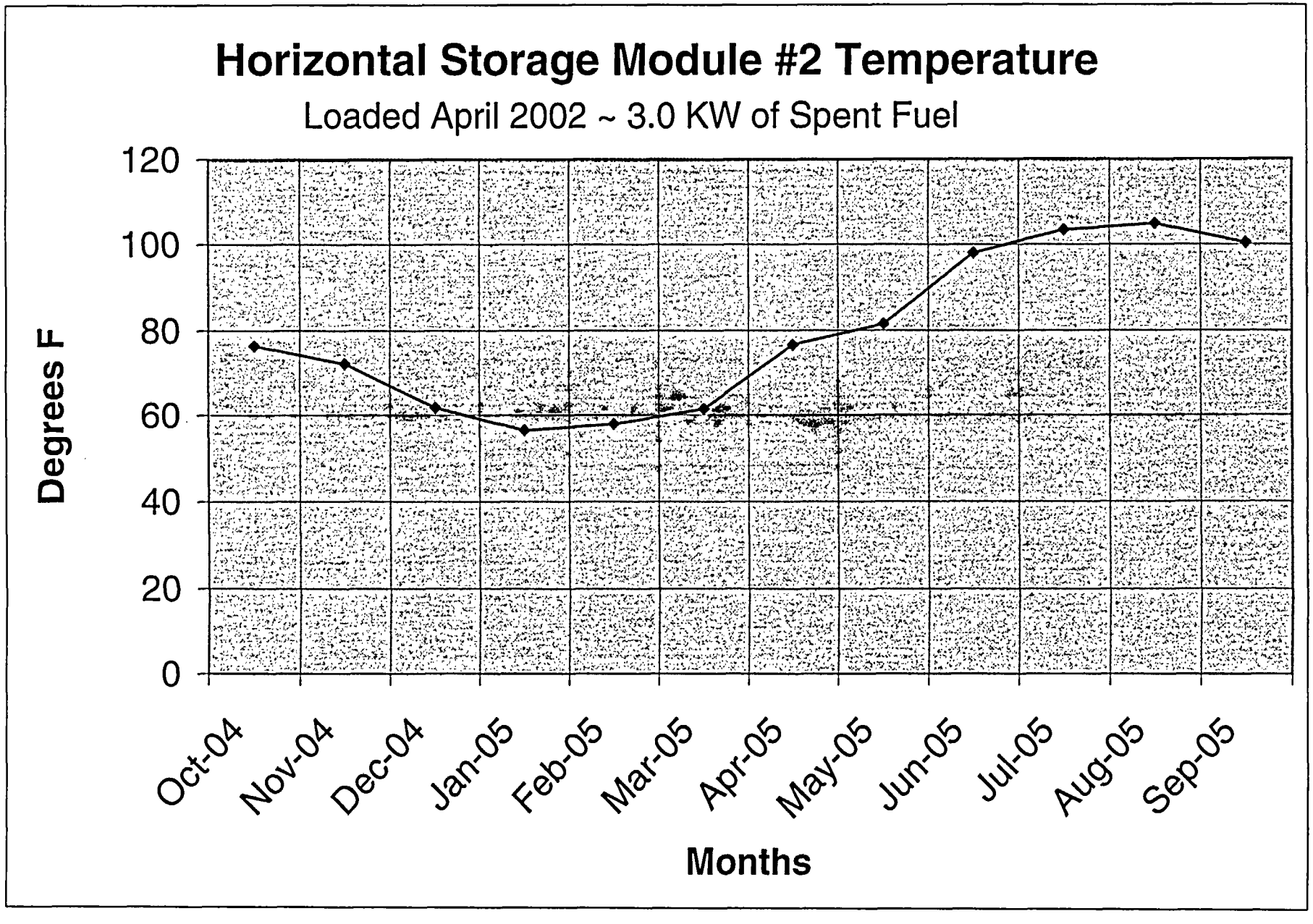
Independent Spent Fuel Storage Installation Building Permit Condition Eleven:

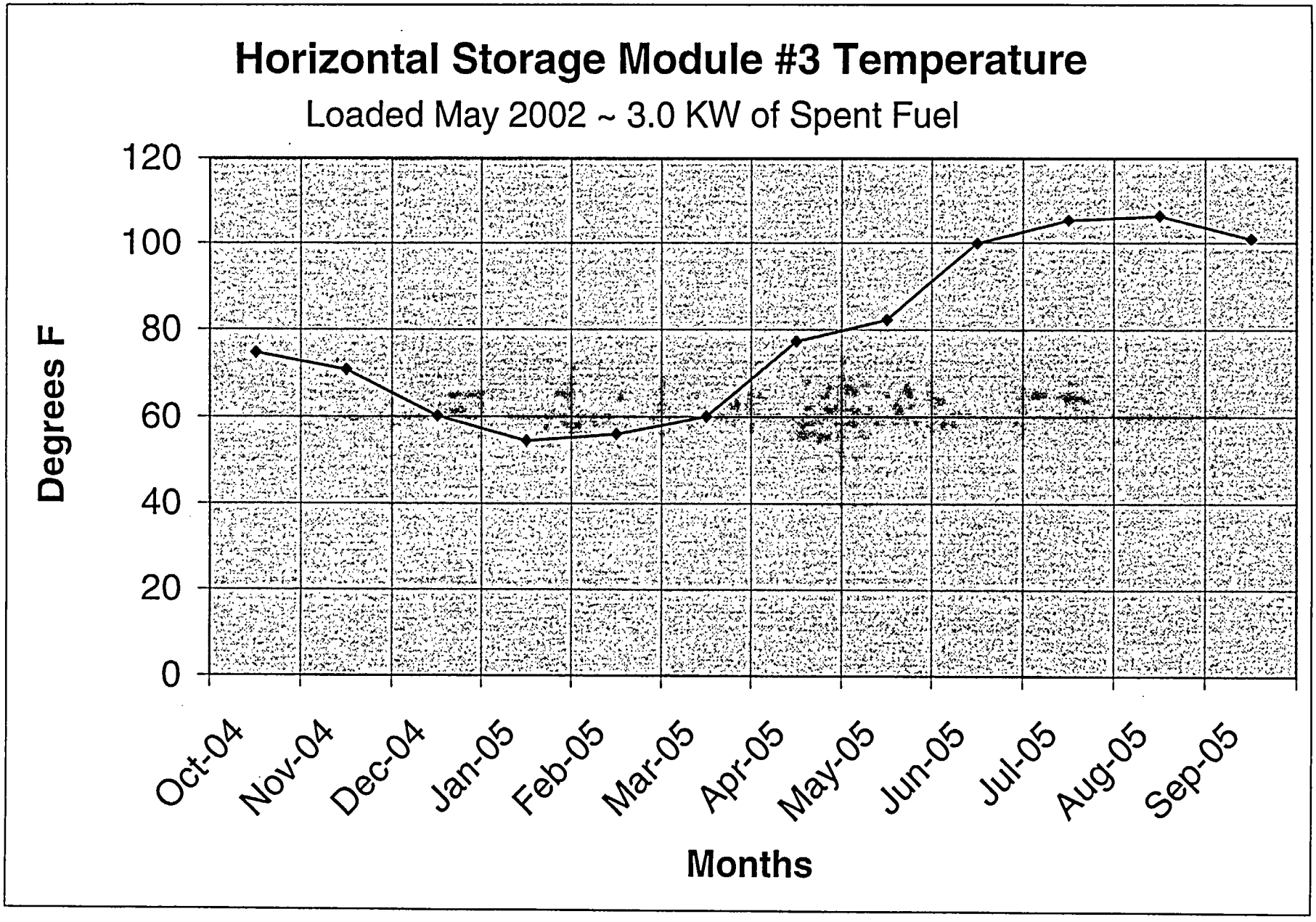
"The applicant shall provide to the township on a yearly basis, the specific number of spent fuel rod assemblies which have been moved into the dry storage facility."

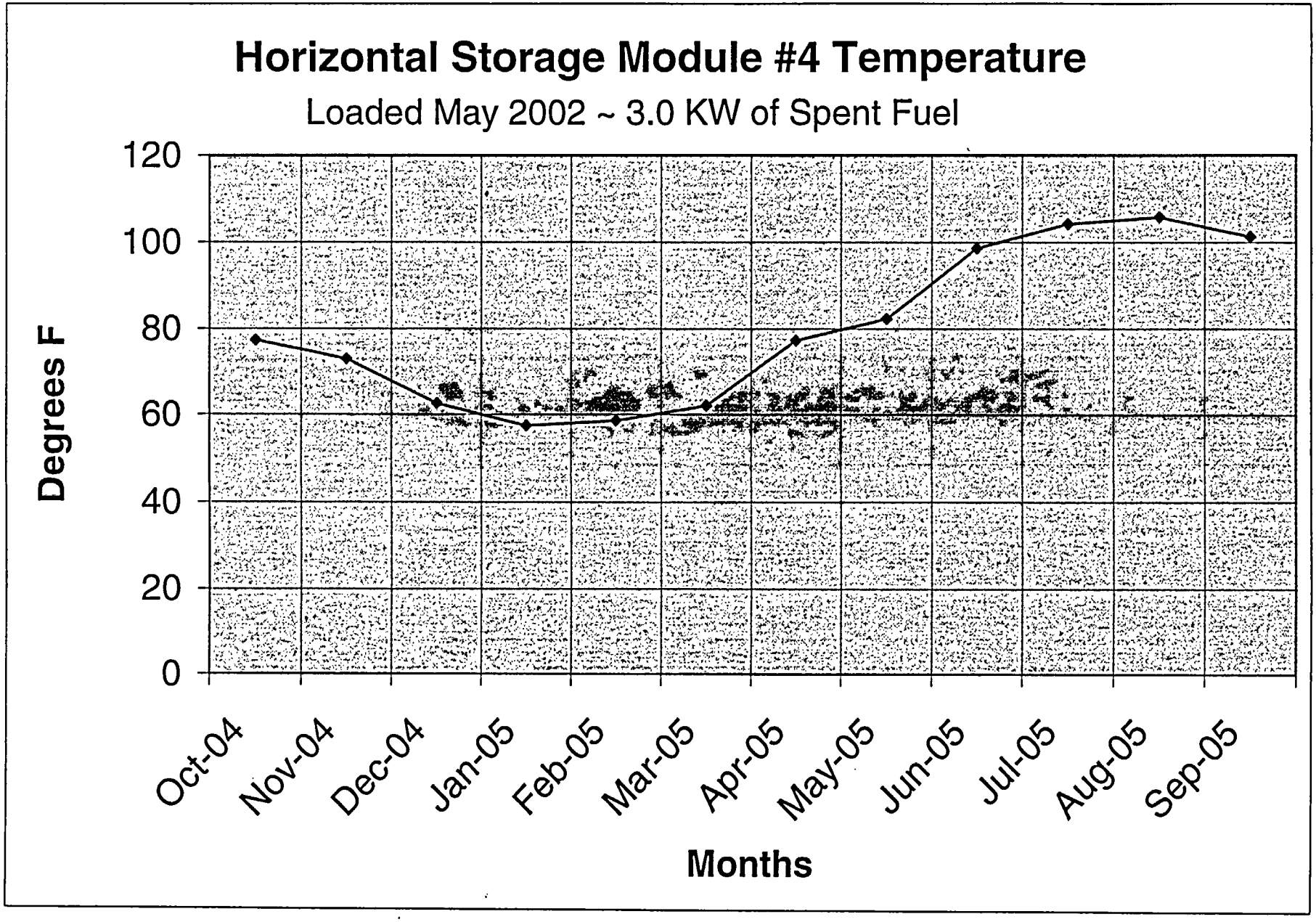
Oyster Creek Generating Station Reply to Condition Eleven:

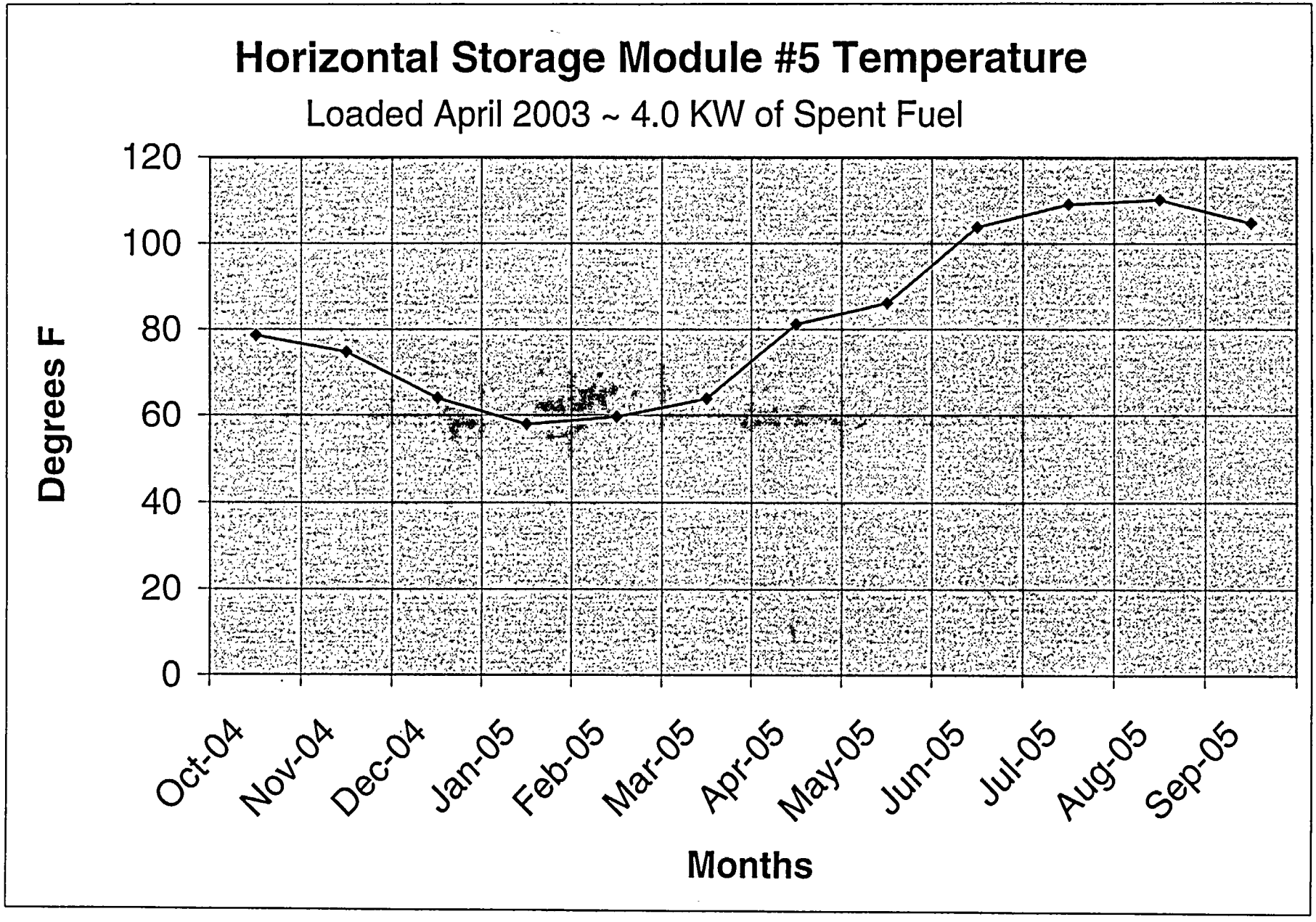
There were no fuel assemblies loaded into the ISFSI prior to 2002. During 2002, 244 fuel assemblies were transferred to the ISFSI. During 2003, 244 additional fuel assemblies were transferred to the ISFSI. During 2004, 183 additional fuel assemblies were transferred to the ISFSI, and during 2005, 305 additional assemblies were transferred to the ISFSI for a total of 976 assemblies. Presently, there are no further transfers planned until the second quarter of 2008; however, rescheduling may occur given plant status and future activities.

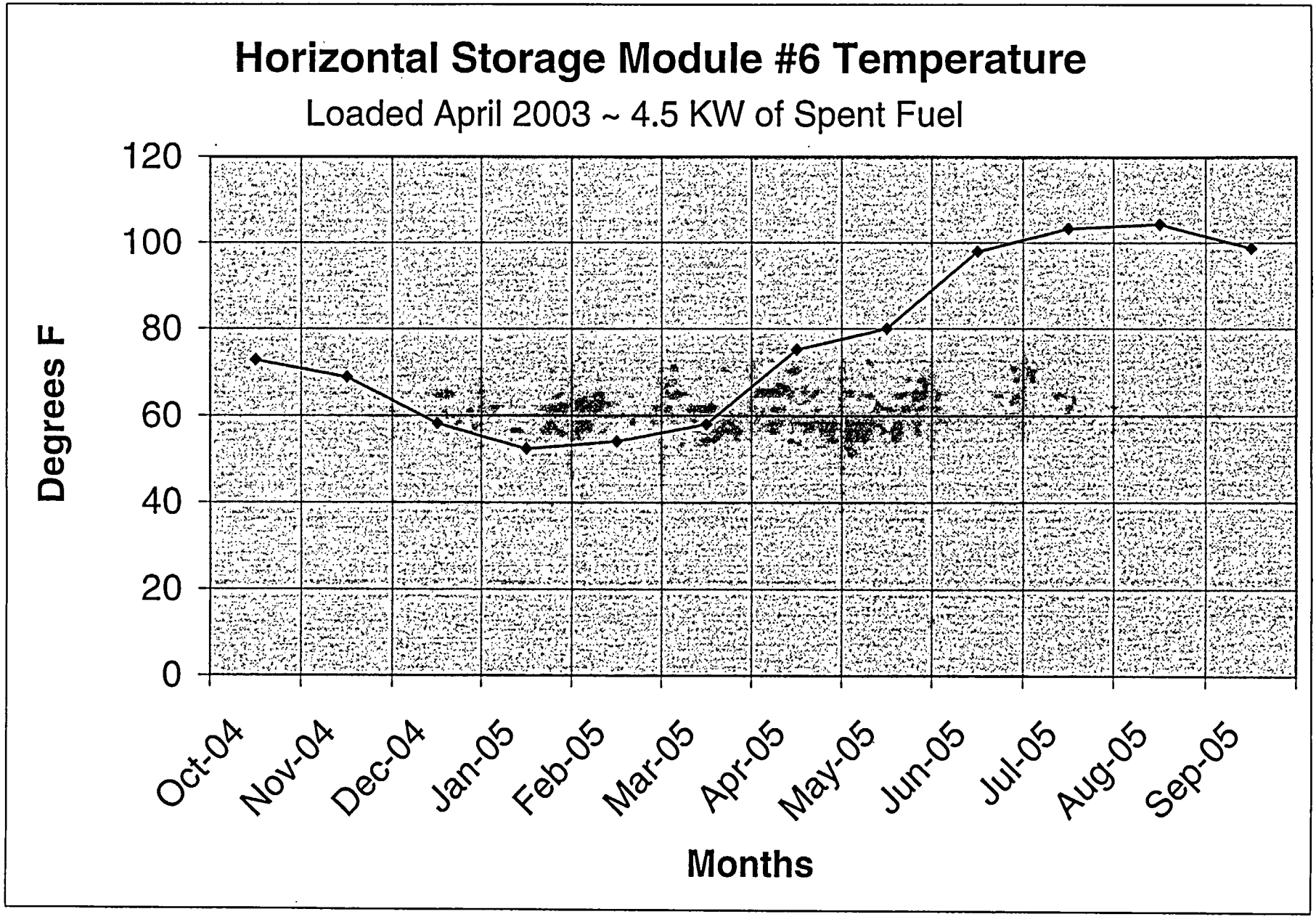

Horizontal Storage Module #1 Temperature
Loaded April 2002 ~ 3.0 KW of Spent Fuel
Degrees F
120
100
80
60
40
20
0
Oct-04
Nov-04
Dec-04
Jan-05
Feb-05
Mar-05
Apr-05
May-05
Jun-05
Jul-05
Aug-05
Sep-05
Months

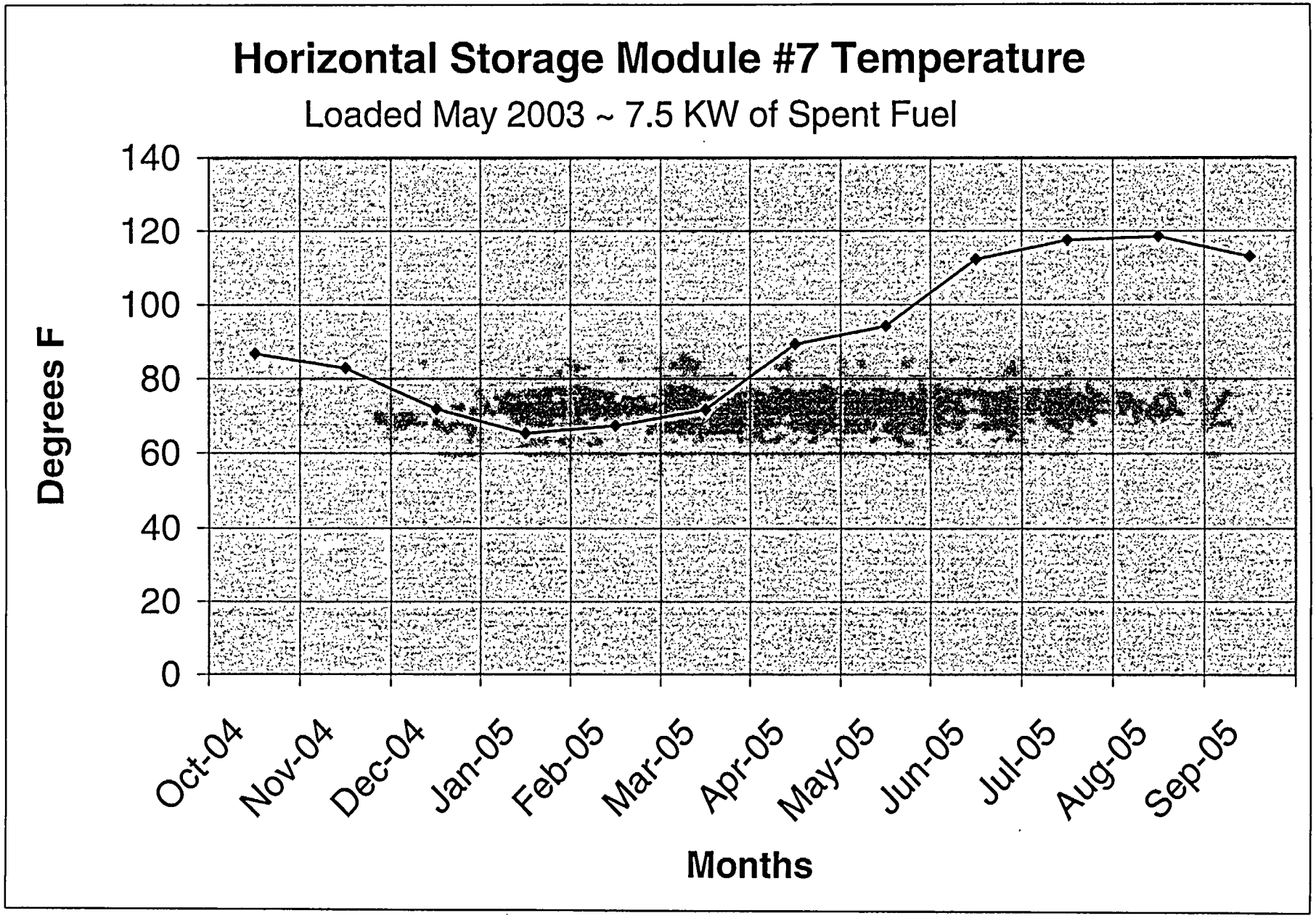

Horizontal Storage Module #2 Temperature
Loaded April 2002 ~ 3.0 KW of Spent Fuel
Degrees F
120
100
80
60
40
20
0
Oct-04
Nov-04
Dec-04
Jan-05
Feb-05
Mar-05
Apr-05
May-05
Jun-05
Jul-05
Aug-05
Sep-05
Months

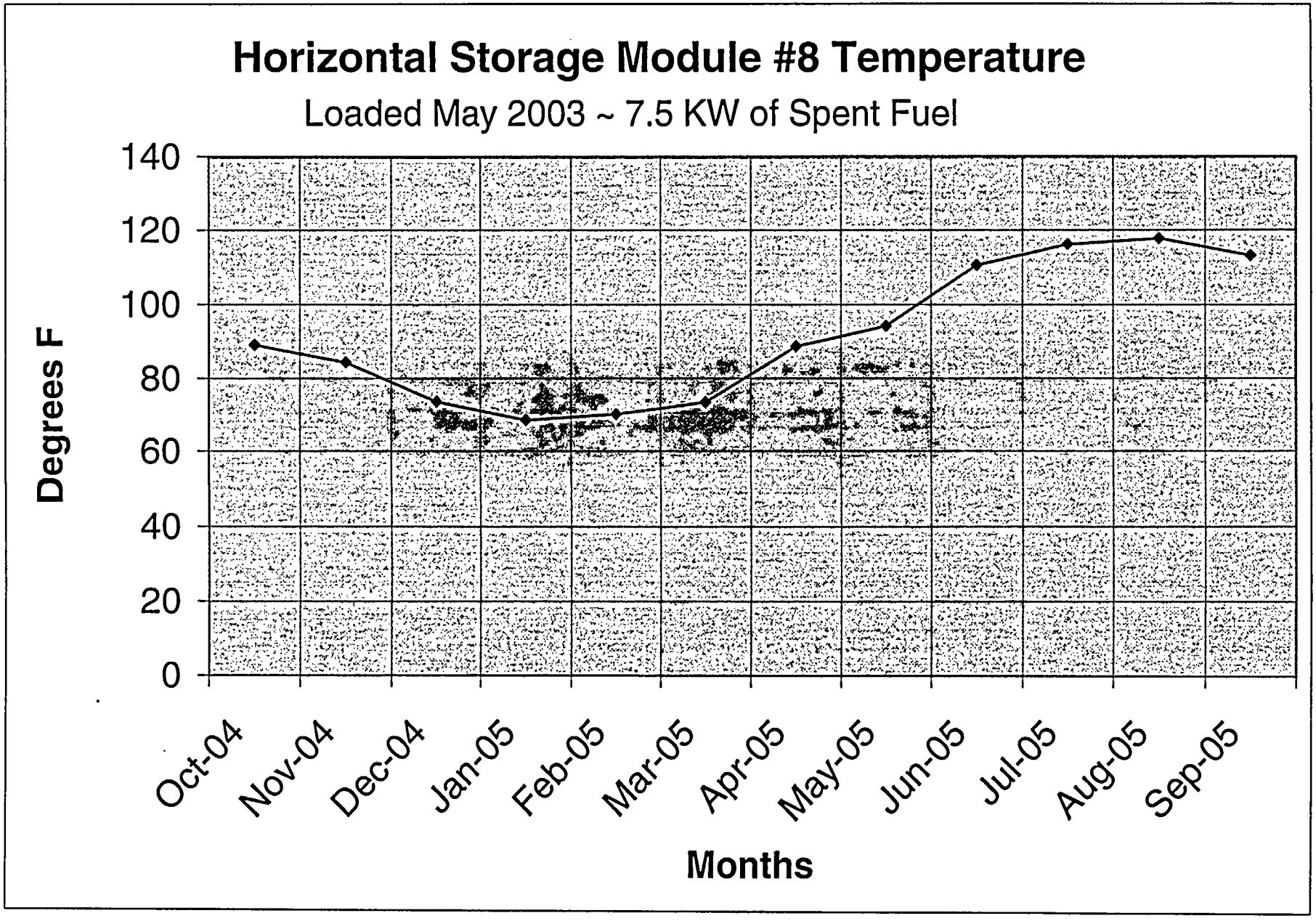

Horizontal Storage Module #3 Temperature
Loaded May 2002 ~ 3.0 KW of Spent Fuel
Degrees F
120
100
80
60
40
20
0
Oct-04
Nov-04
Dec-04
Jan-05
Feb-05
Mar-05
Apr-05
May-05
Jun-05
Jul-05
Aug-05
Sep-05
Months

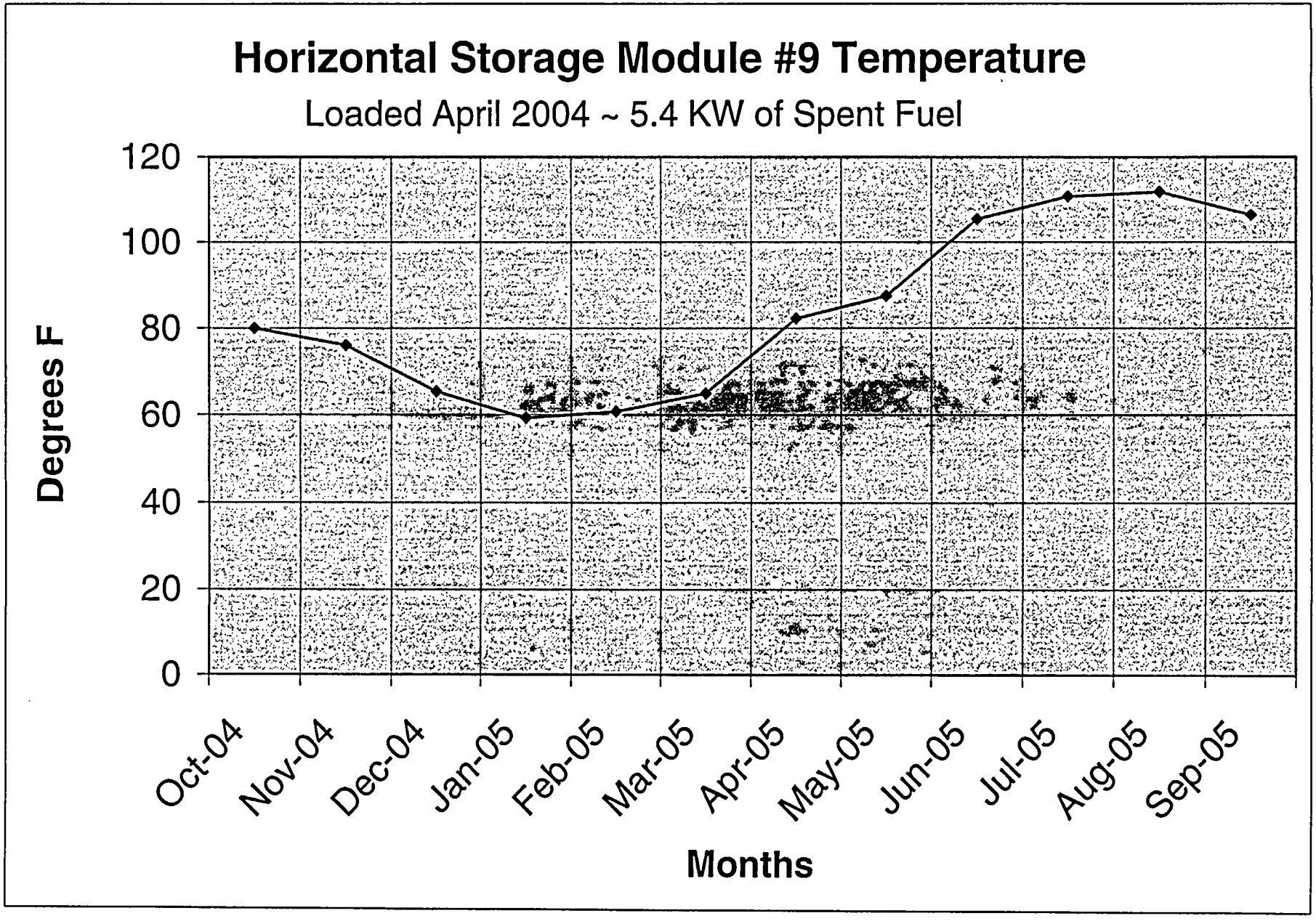

Horizontal Storage Module #4 Temperature
Loaded May 2002 ~ 3.0 KW of Spent Fuel
Degrees F
120
100
80
60
40
20
0
Oct-04
Nov-04
Dec-04
Jan-05
Feb-05
Mar-05
Apr-05
May-05
Jun-05
Jul-05
Aug-05
Sep-05
Months

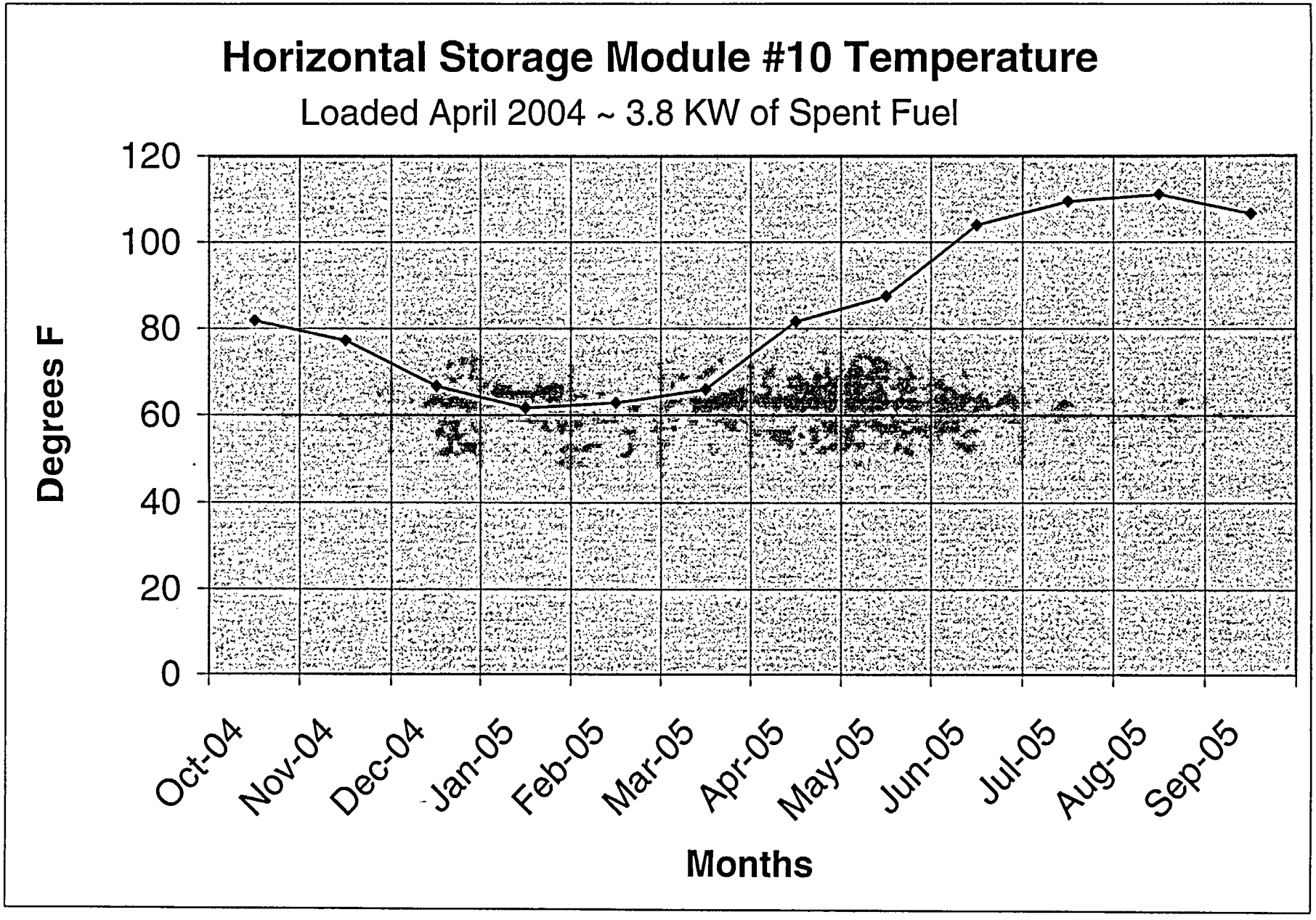

Horizontal Storage Module #5 Temperature
Loaded April 2003 ~ 4.0 KW of Spent Fuel
Degrees F
120
100
80
60
40
20
0
Oct-04
Nov-04
Dec-04
Jan-05
Feb-05
Mar-05
Apr-05
May-05
Jun-05
Jul-05
Aug-05
Sep-05
Months

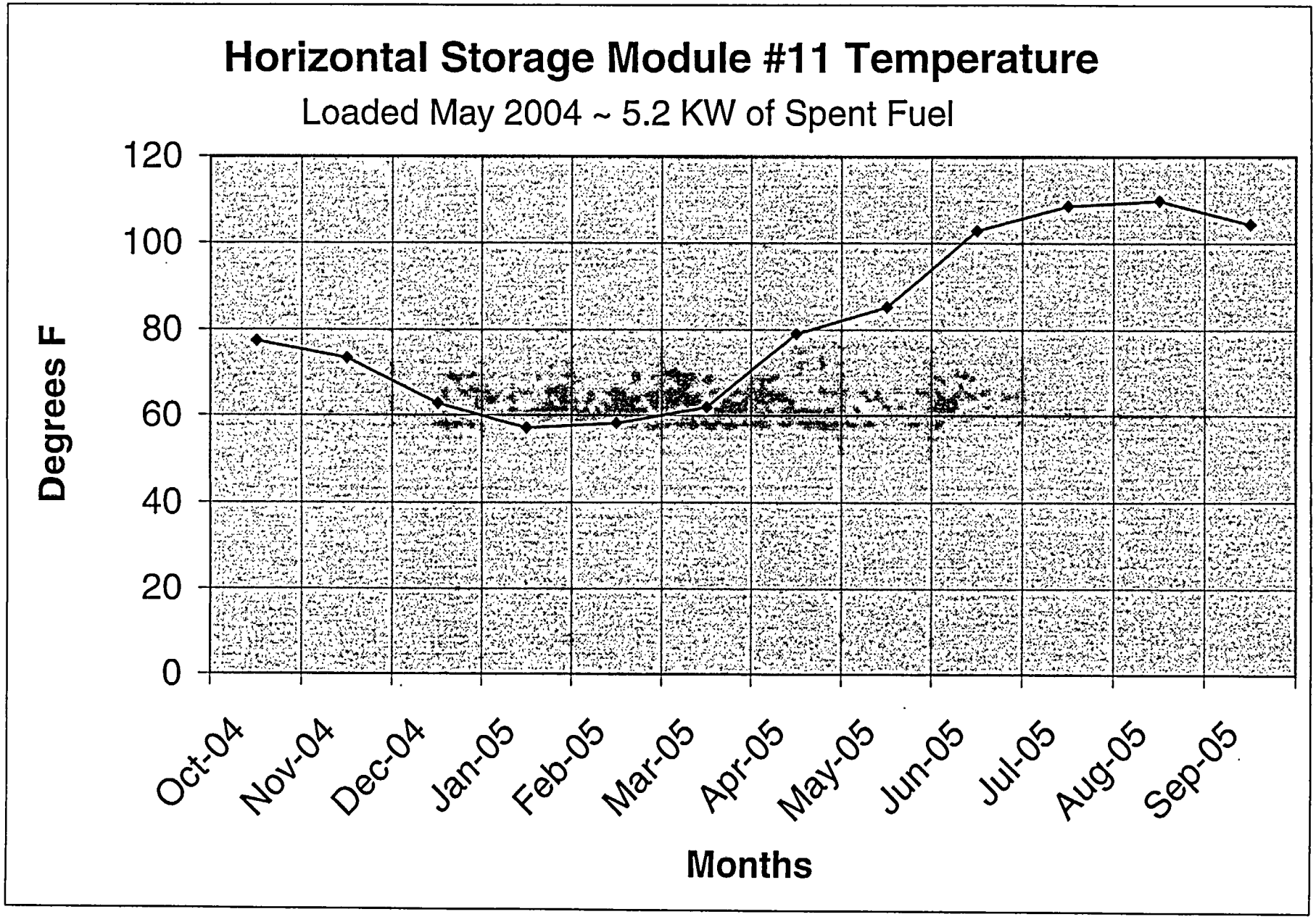

Horizontal Storage Module #6 Temperature
Loaded April 2003 ~ 4.5 KW of Spent Fuel
Degrees F
120
100
80
60
40
20
0
Oct-04
Nov-04
Dec-04
Jan-05
Feb-05
Mar-05
Apr-05
May-05
Jun-05
Jul-05
Aug-05
Sep-05
Months

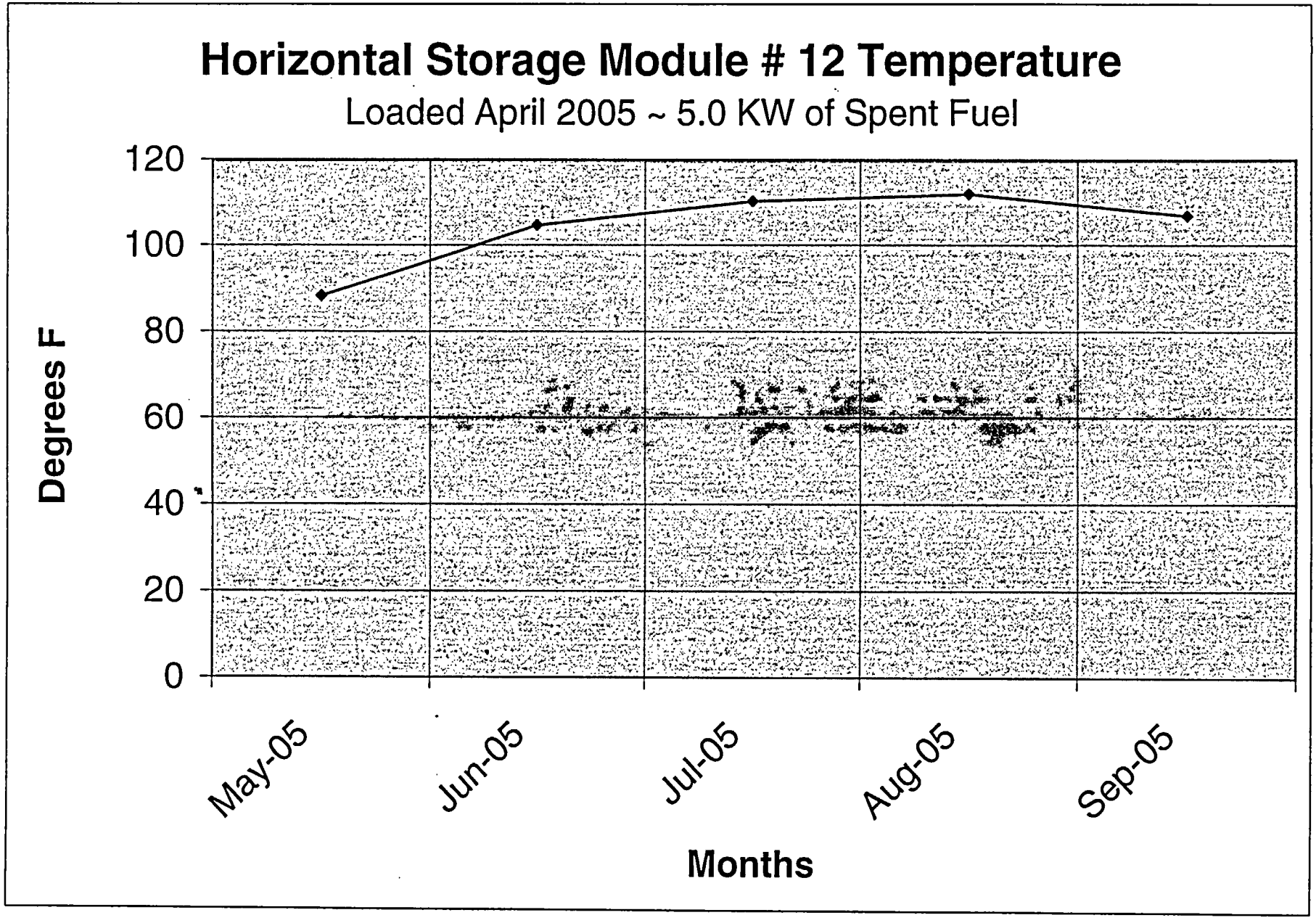

Horizontal Storage Module #7 Temperature
Loaded May 2003 ~ 7.5 KW of Spent Fuel
Degrees F
140
120
100
80
60
40
20
0
Oct-04
Nov-04
Dec-04
Jan-05
Feb-05
Mar-05
Apr-05
May-05
Jun-05
Jul-05
Aug-05
Sep-05
Months

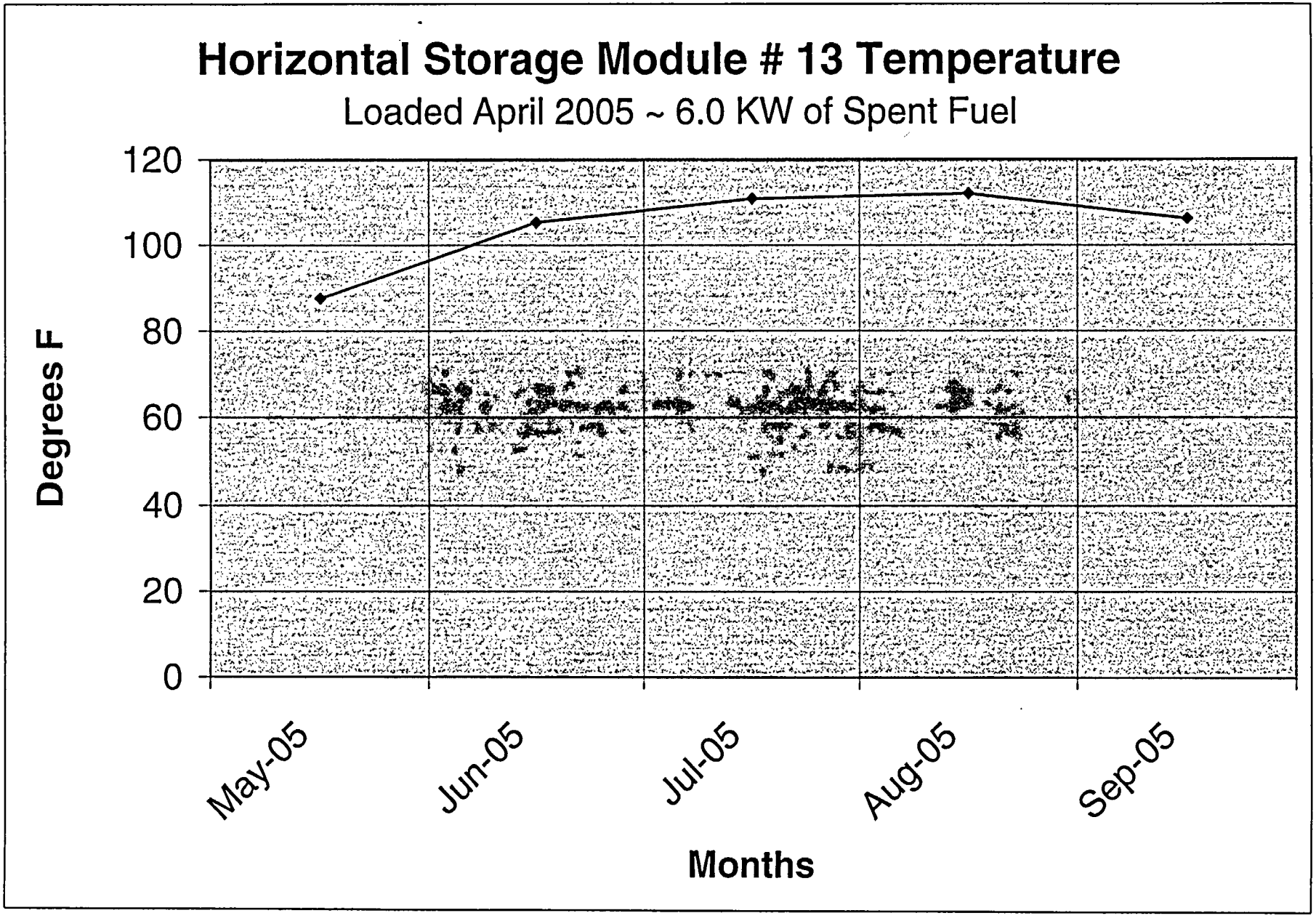

Horizontal Storage Module #8 Temperature
Loaded May 2003 ~ 7.5 KW of Spent Fuel
Degrees F
140
120
100
80
60
40
20
0
Oct-04
Nov-04
Dec-04
Jan-05
Feb-05
Mar-05
Apr-05
May-05
Jun-05
Jul-05
Aug-05
Sep-05
Months

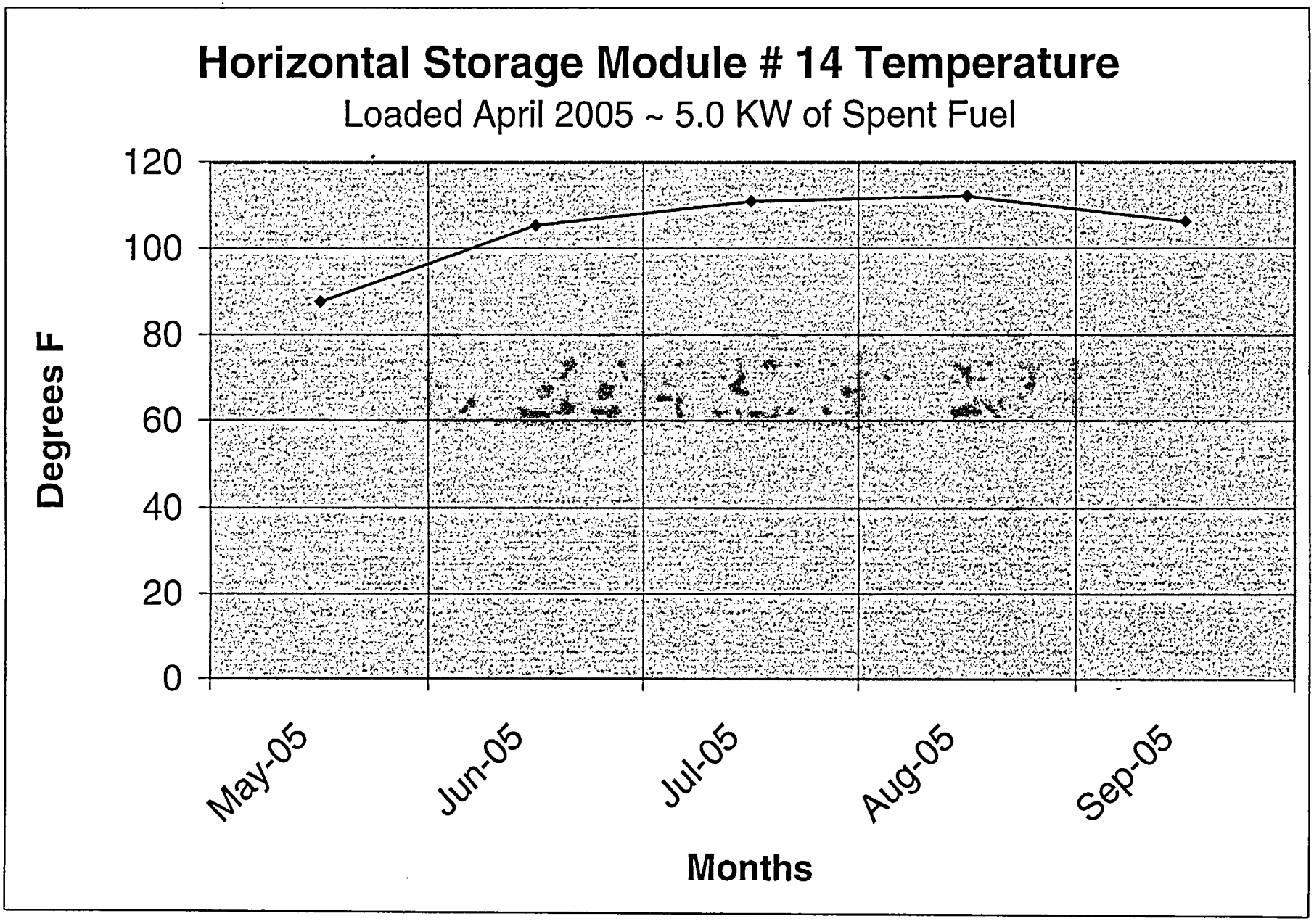

Horizontal Storage Module #9 Temperature
Loaded April 2004 ~ 5.4 KW of Spent Fuel
Degrees F
120
100
80
60
40
20
0
Oct-04
Nov-04
Dec-04
Jan-05
Feb-05
Mar-05
Apr-05
May-05
Jun-05
Jul-05
Aug-05
Sep-05
Months

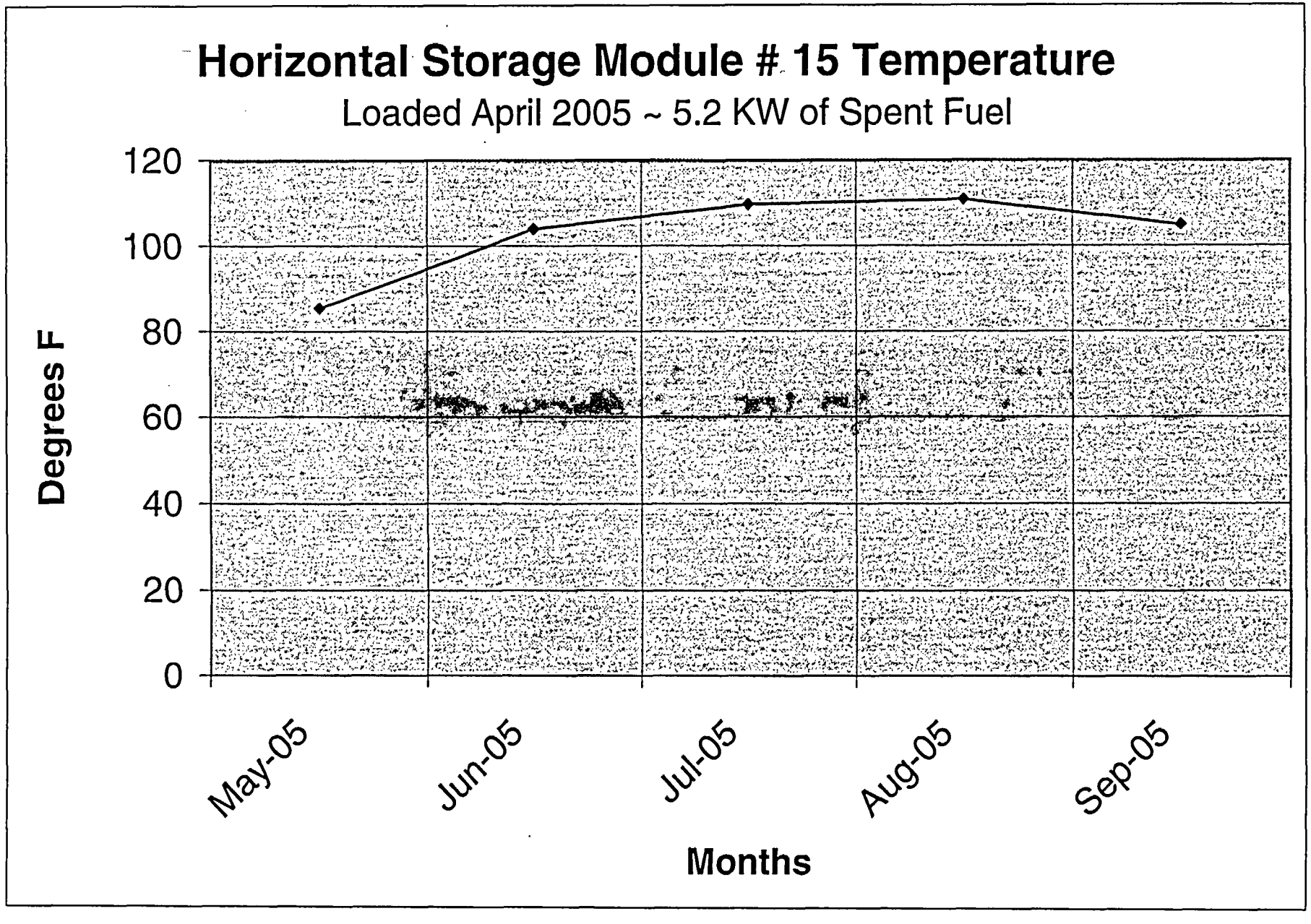

Horizontal Storage Module #10 Temperature
Loaded April 2004 ~ 3.8 KW of Spent Fuel
Degrees F
120
100
80
60
40
20
0
Oct-04
Nov-04
Dec-04
Jan-05
Feb-05
Mar-05
Apr-05
May-05
Jun-05
Jul-05
Aug-05
Sep-05
Months

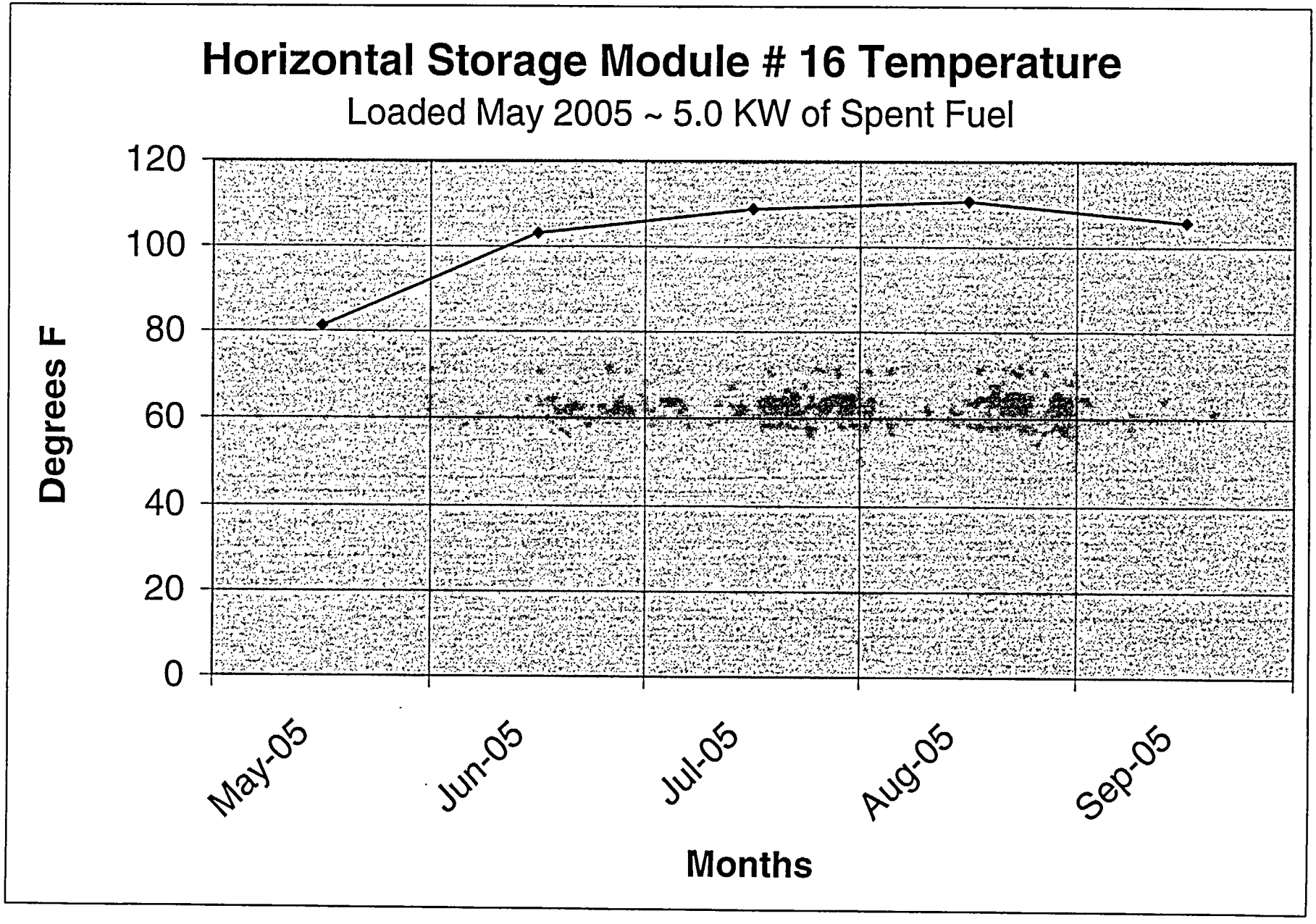

Horizontal Storage Module #11 Temperature
Loaded May 2004 ~ 5.2 KW of Spent Fuel
Degrees F
120
100
80
60
40
20
0
Oct-04
Nov-04
Dec-04
Jan-05
Feb-05
Mar-05
Apr-05
May-05
Jun-05
Jul-05
Aug-05
Sep-05
Months

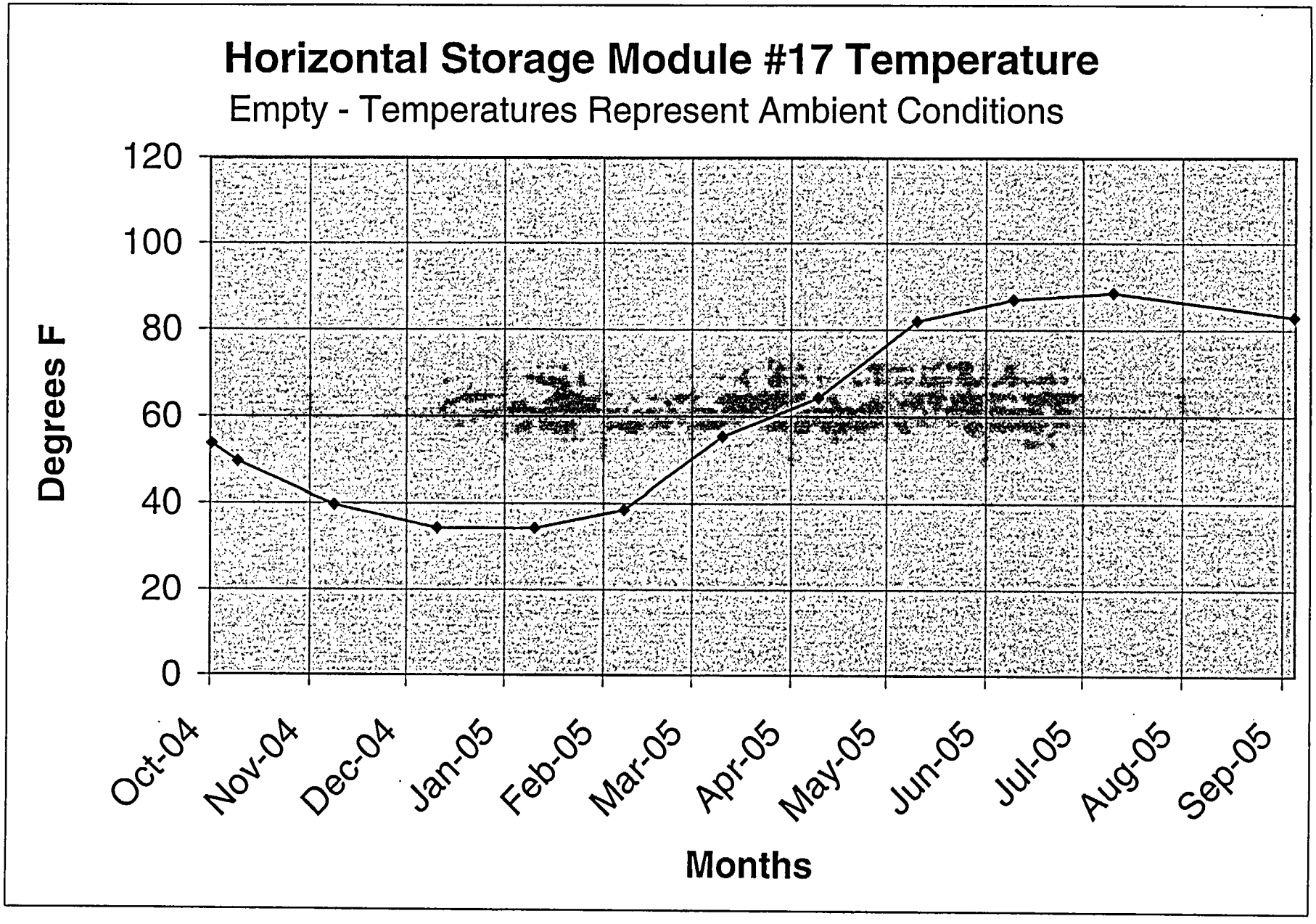

Horizontal Storage Module # 12 Temperature
Loaded April 2005 ~ 5.0 KW of Spent Fuel
Degrees F
120
100
80
60
40
20
0
May-05
Jun-05
Jul-05
Aug-05
Sep-05
Months

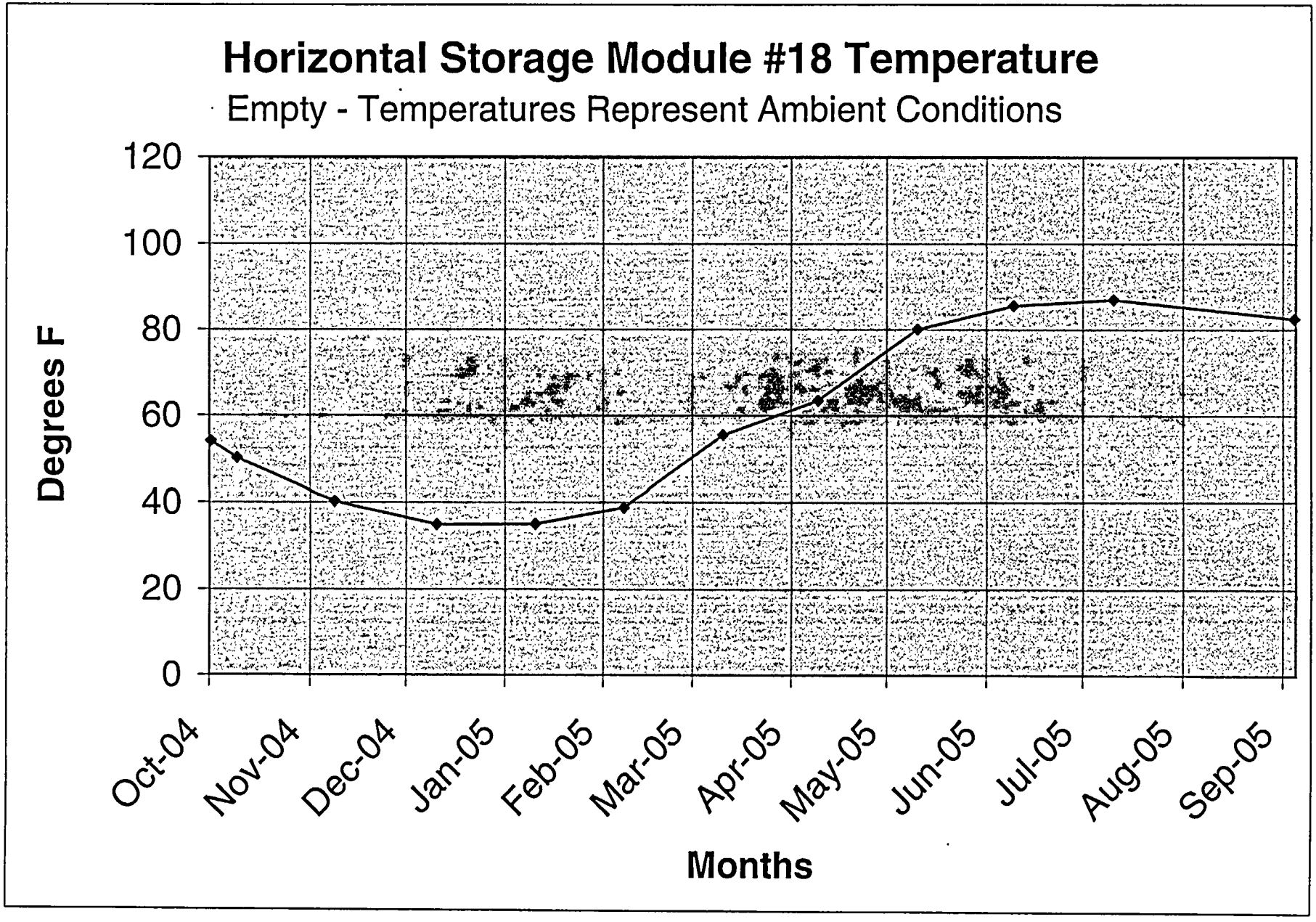

Horizontal Storage Module # 13 Temperature
Loaded April 2005 ~ 6.0 KW of Spent Fuel
Degrees F
120
100
80
60
40
20
0
May-05
Jun-05
Jul-05
Aug-05
Sep-05
Months


Horizontal Storage Module # 14 Temperature
Loaded April 2005 ~ 5.0 KW of Spent Fuel
Degrees F
120
100
80
60
40
20
0
May-05
Jun-05
Jul-05
Aug-05
Sep-05
Months


Horizontal Storage Module # 15 Temperature
Loaded April 2005 ~ 5.2 KW of Spent Fuel
Degrees F
120
100
80
60
40
20
0
May-05
Jun-05
Jul-05
Aug-05
Sep-05
Months


Horizontal Storage Module # 16 Temperature
Loaded May 2005 ~ 5.0 KW of Spent Fuel
Degrees F
120
100
80
60
40
20
0
May-05
Jun-05
Jul-05
Aug-05
Sep-05
Months

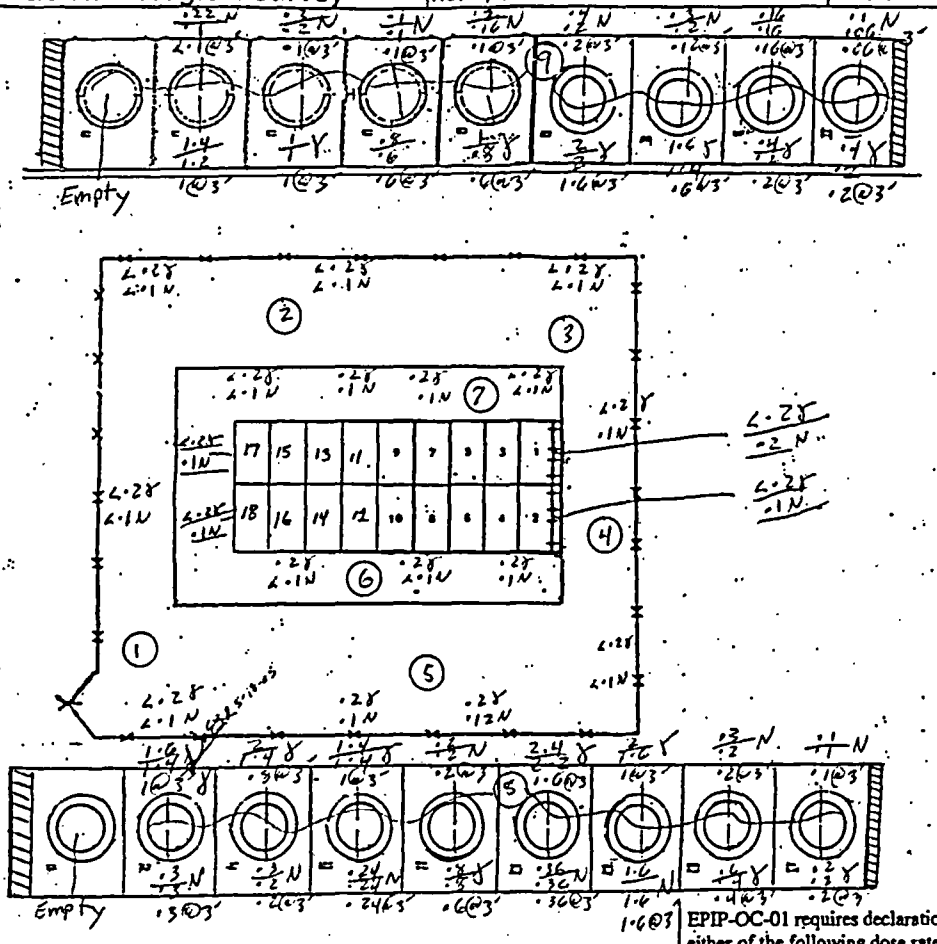

Horizontal Storage Module #17 Temperature
Empty - Temperatures Represent Ambient Conditions
Degrees F
120
100
80
60
40
20
0
Oct-04
Nov-04
Dec-04
Jan-05
Feb-05
Mar-05
Apr-05
May-05
Jun-05
Jul-05
Aug-05
Sep-05
Months


Horizontal Storage Module #18 Temperature
Empty - Temperatures Represent Ambient Conditions
Degrees F
120
100
80
60
40
20
0
Oct-04
Nov-04
Dec-04
Jan-05
Feb-05
Mar-05
Apr-05
May-05
Jun-05
Jul-05
Aug-05
Sep-05
Months

OCGS Radiological Survey | No. YFS-05-3102 | Date 5-18-05 | Time 11:00 | Location INDEPENDENT SPENT FUEL STORAGE FAC

RWP OC-05-23 | Reason HSM's post job—Rad

Rx. Power - 100 %



SMEARABLE CONTAMINATION					INSTRUMENTATION DATA
	LOCATION	β γ ☒ CCPM ☐ DPM ☐ MRAD/HR	α DPM	AREA	RADIATION SURVEY
1	Pad Ground	< 100	N/A	L	INST R02
2					S/N 077352 BCF 4.09
3					CDD 10-13-05
4					INST ASP-1
5					S/N 700195 BCF N/A
6					CDD 11-3-05
7	Pad Ground	√	√	√	CONTAMINATION SURVEY
8	HSM's				INST Rm-14
9	HSM's	< 100	N/A	L	S/N 075802
10					CDD 10-7-05
11					EFF 10% BKG 100 CPM
12					INST
13					S/N
14					CDD
15					CF BKG CPM
16					AIR SAMPLE DATA
17					FC N/A uCi/cc
18					L = Large Area Smear
19					NC = Not Counted
20					NA = Not Applicable
					NT = Not Taken

Surveyor: (Print Name) E. Robinson II

Signature E. Robinson II Date 5-18-05

Reviewer: (Print Name) ROBERT A. HEFFNER

Signature Robert A. Heffner Date 051805

Hd = Head, Ch = Chest, Kn = Knee, W = Waist

All dose rates in mrem/hr unless otherwise noted

☒ No Beta Detected Unless Otherwise Noted ☐ No Beta Readings Taken

# = Gamma G.A.	ⓢ = Smear
# B = Beta	DF - Direct Frisk
# N = Neutron	X-X or - - = Rad Boundary
# / # = Contact / 30 cm	#/# = Beta / γ Contact
# B / # = β / γ	#/# = Beta / γ 30cm

EPIP-OC-01 requires declaration of a UE if either of the following dose rates are found:

- 2 R/hr at the face of a spent fuel module
- 1 R/hr at 1 foot from a damaged module in the Independent Spent Fuel Storage Installation

HSM Dose Rate Tech Spec Limits: Dose rates at the following locations shall be limited to levels which are ≤:

- 400 mrem/hr at 3 feet from the HSM surface
- HSM door on center line of DSC 100 mrem/hr
- End shield wall exterior 20 mrem/hr

Restricted Area boundary (ISFSI fence) dose rates: Limited to < 2 mrem/hr

γ and $^{1}n_{0}$ dose rate surveys on contact, at 1 and at 3 feet from the loaded HSMs, general area and fenceline as necessary to verify postings. Gross wipe contamination survey.