

CAS
DEP

Fell

TABLE OF CONTENTS

INTRODUCTION

SUMMARY

RADIATION SAFETY

RADIATION SAFETY

OHIO DEPARTMENT

RADIATION SAFETY

ADMINISTRATIVE

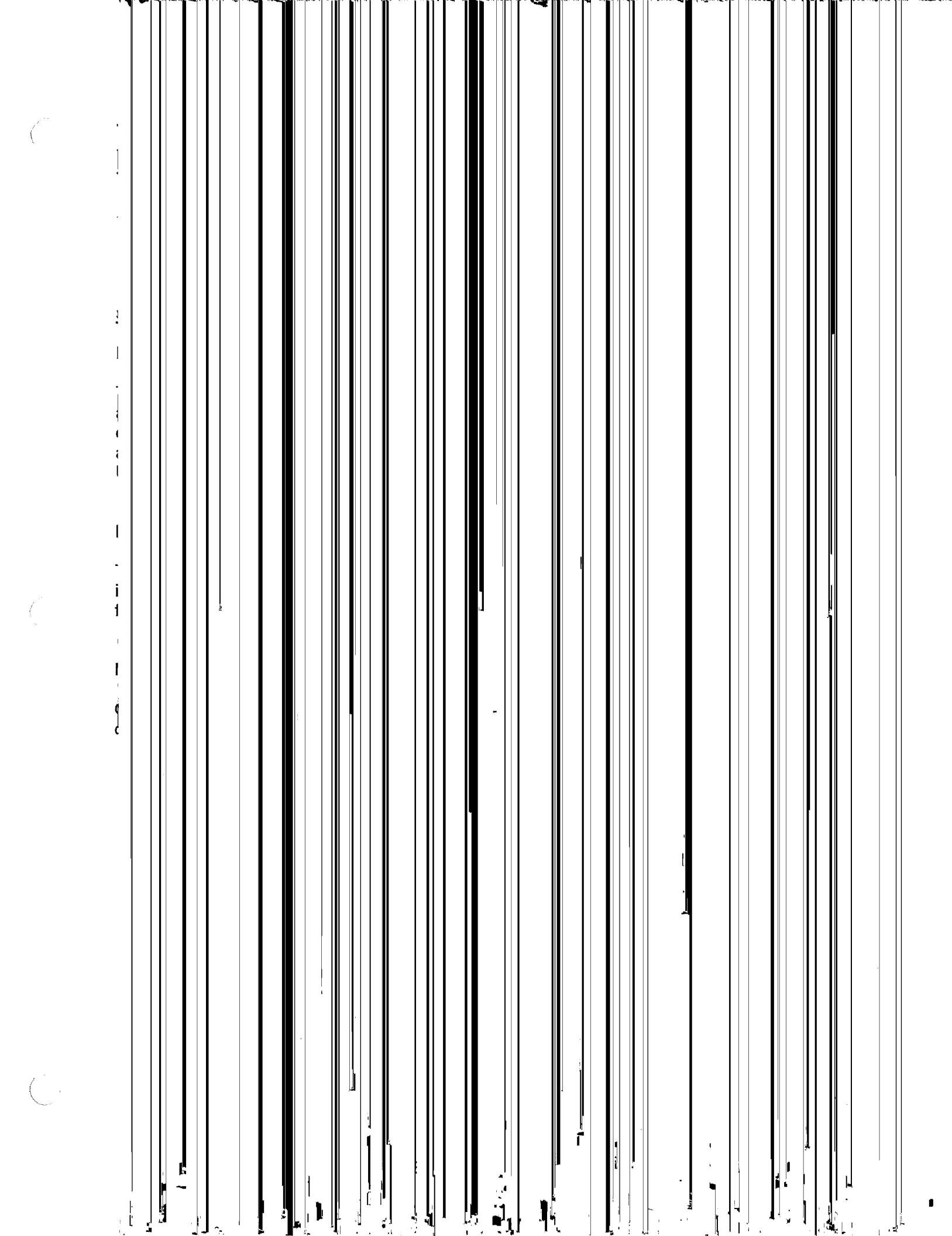
RADIATION SAFETY

RADIATION SAFETY

RADIATION SAFETY

APPENDIX

- Authorized Users
- Sealed Sources
- X-ray Devices
- Lasers
- Organization



RAI

The
inte
trair
prog
inte

OHI

CW
pos:
exp:
scop:

The
regis
equi
ODF
ODF

DECOMMISSIONING

The CWRU took effect on 10/2019. Until then, we will cover possible decommissioning of RAM maintenance. We have an agreement with a good financial institution located at the

RADIOACTIVE MATERIALS

RAM and/or R

- Main campus
- University Hall
- Wolstein Hall
- Health Education Center
- Health Education Center

RAM and/or F

- Shipping
- Wolstein Hall
- Health Education Center
- Health Education Center

PURPOSE FOR USE

The majority of the isotopes used within irradiation standards are

RAD

RAD

The
comi
and
Unive
provi

The
comi
votin

VOT

Dr
De
BR
LC
Te
Ch
Ex

Dr
De
BR
LC
Te

Dr.
De
Bo
LC
Te

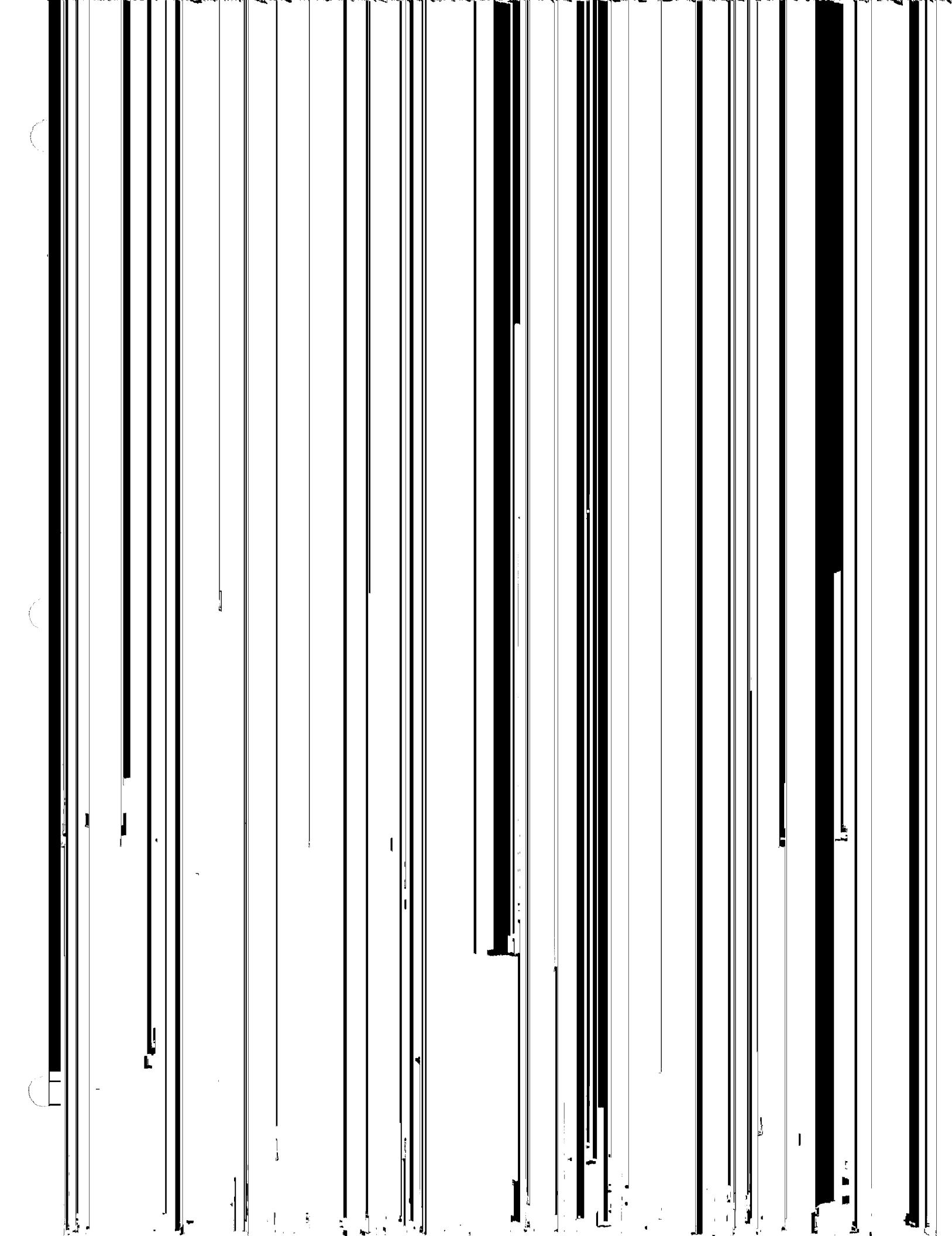
EX-C

Ric
Vic
De
Ad
Ad
LC

Br
Un
Bis
LC

SUPP

Nai
De
Sel
Firs



SEN

The
their
is g
repr
Safe
resp
pres
Rad
direc

RSC

The
safe
appri
for m
are
inclus

ADM

Adm
are/is
proce

Gen
jeopa
Thes
and 1
of the

Ther

Mino

•
•
•

Mode

•
•
•
•
•
•
•
•

Majo

•
•
•

There
listed
and r
three
routin
mode

V
N
M
M
T

The
depart
2021.

AU CATEGORIES

RADIATION ACTIVE

AUs who actively use by the RSOF three laboratory. A listing

RADIATION INACTIVE

These AUs do not

RADIATION ACTIVE

AUs who did not at request, have their

DEPARTED (D)

AUs, who no longer decommissioned fo

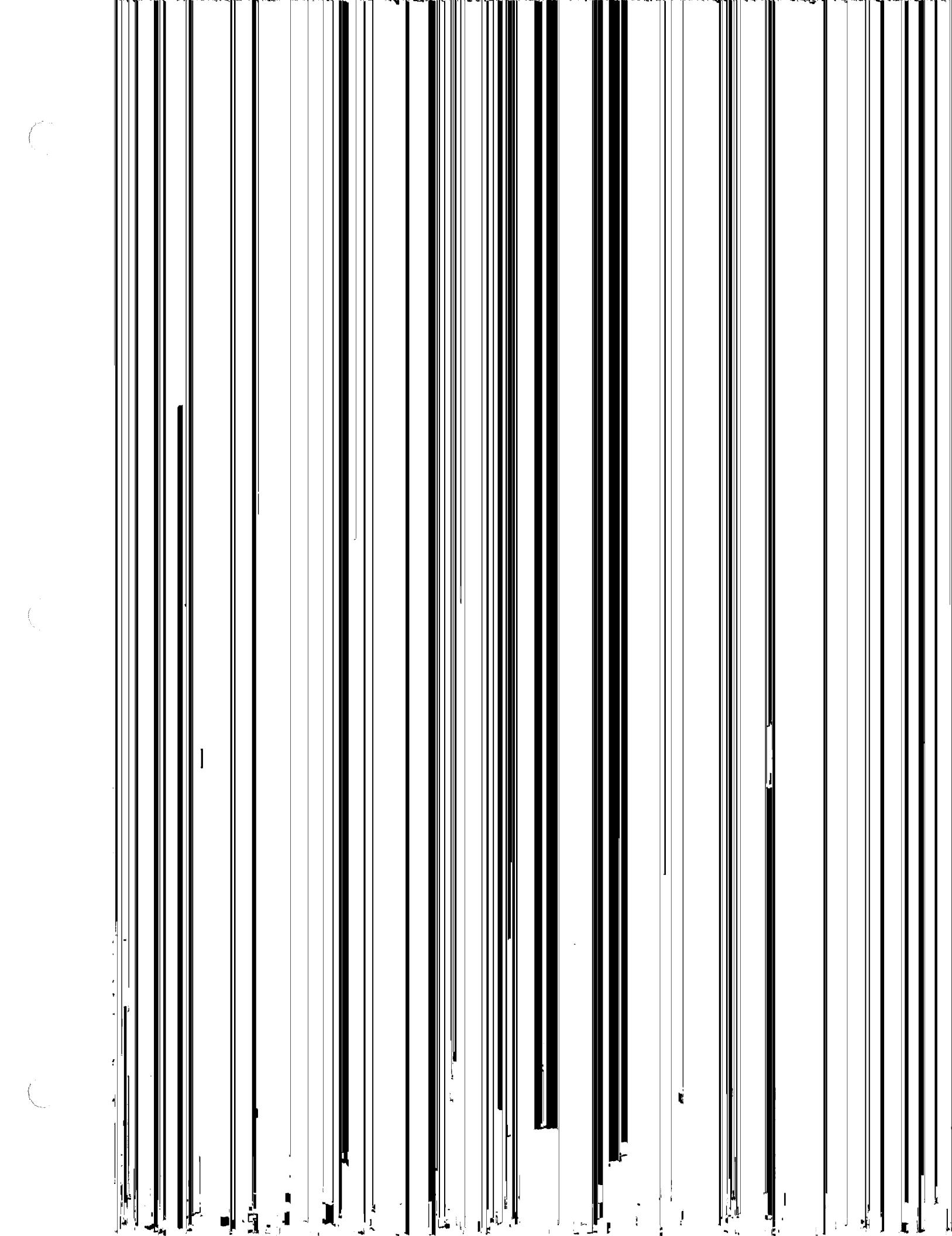
AUs	20/21
RA	35
SM	18
RI	5
D	1
Total in Program	53

MASTER ISOTOPES

The master isotope the AUs' inventory relative to the Nation

AU RADIOISOTOPES

The radioisotope in RAM material each on hand.



RADIA

A radial

ANCILL

An anc
classroo
services
departm
training

RADIA1

An X-ra

IRRADI

Personr
the RSC
any per.
and fing

TRAININ

The RS
refreshes
are esse
by the a
and othe
irradiato

New iso
safety re
respons
X-ray eq
fluorosc
general
as-need
there are
annual r

All non-
radiation.

depa
from

F
 C
 F
 D
 A
 L
 L

Over
2021
the R
isotol

FACI

CWR
persc
RSO
inspe
avail

LABD

There
labora
analy
suppl

Rac

Fac
are
Buil

RSC

The
RSC
mac
The
dete
with
of a
of u
chei
soft
equ.
proc

Rad

Mec

This
disp
syst
metr
equi

The
liqui
solic
Liqu
floor
carc
of th
and

Wol:

Roo
cont
solic
area

Ro
cer
we

IO

Sp
cor

AN

Co
bui
Re
che
gro
Ro
hol
dis
fac

EQ

An
me
me
ins
sim

The
nev
WF

Qu
cou
(CA
ser
wh
ser

RADIAT

PURCHASE

AUs and purchase AUs must be added to isotope. RSOF. before de

TRANSF

The RSC (off cam transfer isotope t

ISOTOP
^{133}Ba
^{11}C
^{14}C
^{64}Cu
^{18}F
^3H
^{22}Na
^{32}P
^{33}P
^{35}S
Total

RADI
MAT
Order
mCi
Picku
Sewe
Trans
mCi

RECEIPI

Every pa and evidence than 10 n the labora on the pa

g C
c v
r R
m s a w p

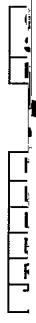
D E
E r e d i s

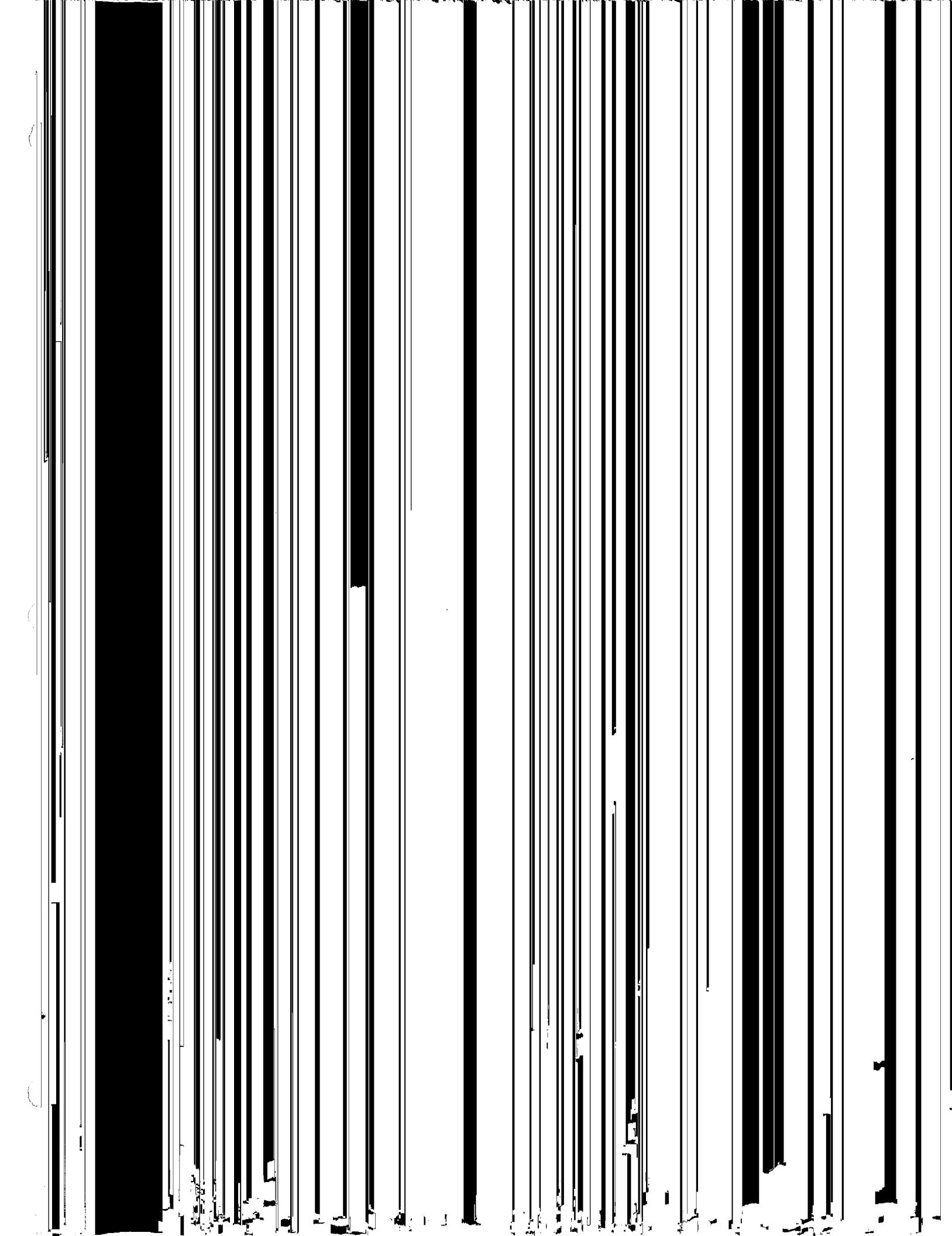
S C
C r e a

T h i n
i n s t

S t h o
s c f

I F
F i r e d





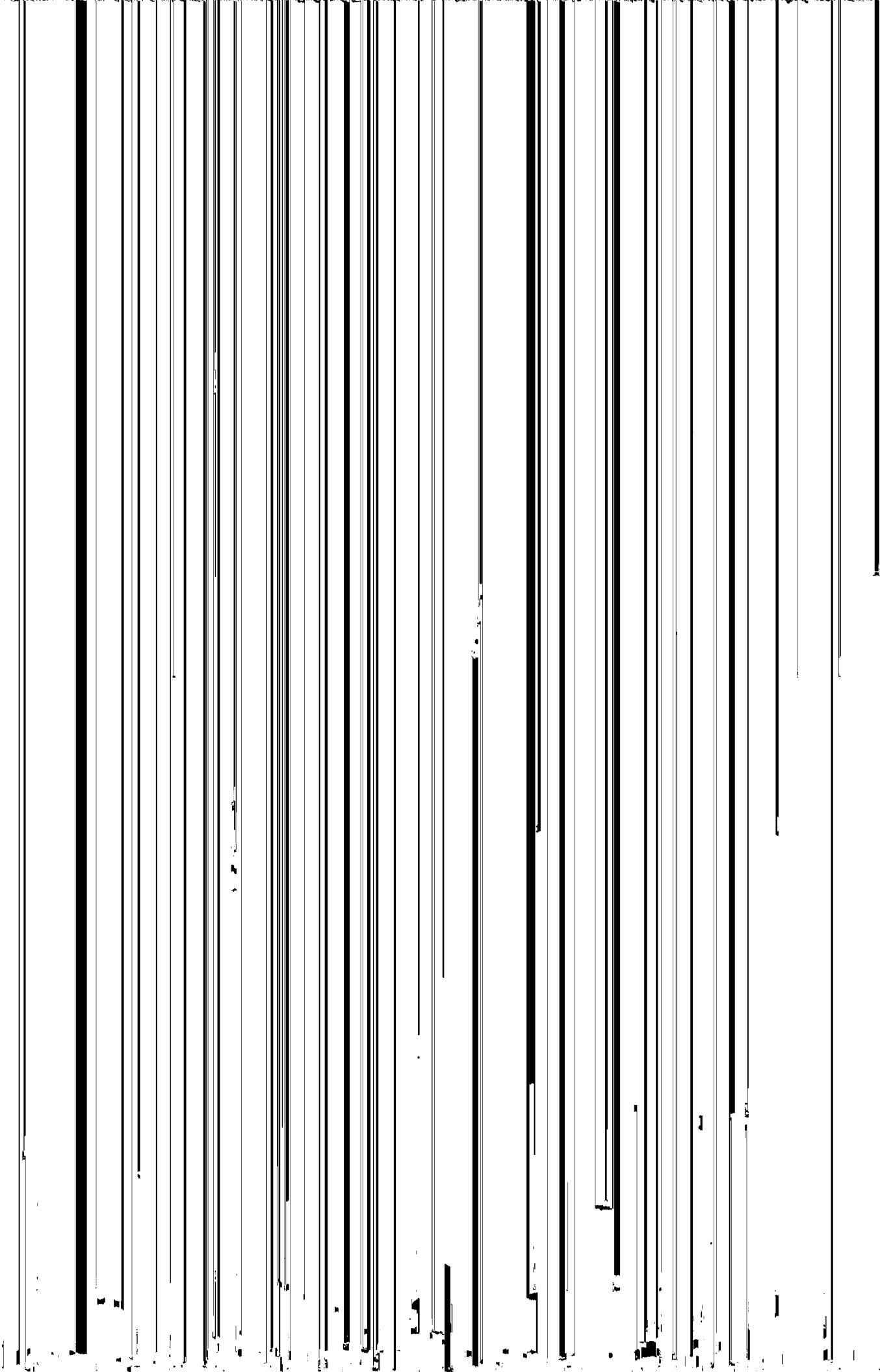
Core

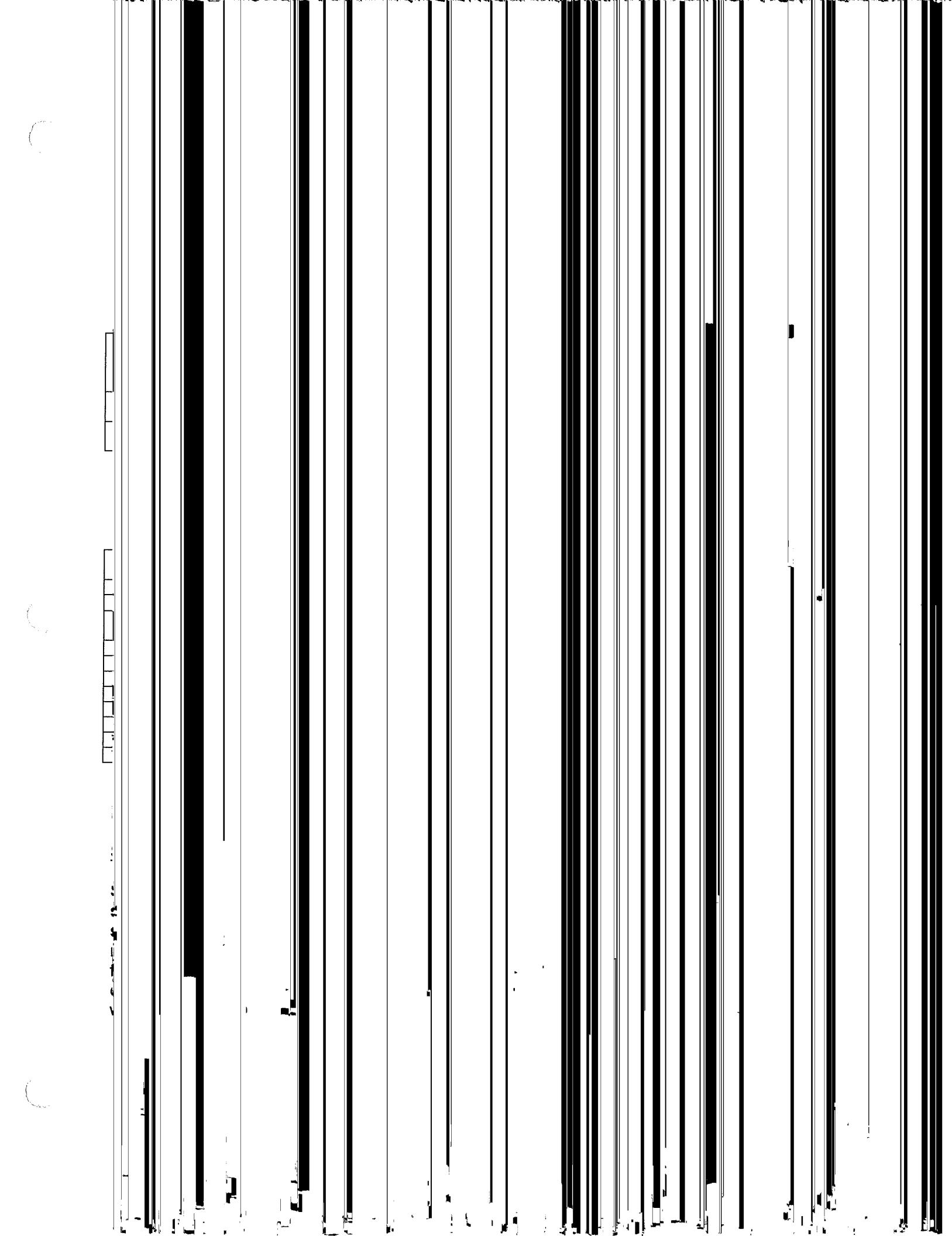
Accr

Diff

Core

Diff





ଅନ୍ତର୍ମାତ୍ରାବ୍ଦୀ ପାଇଁ ଏହାକୁ ଆଶୀର୍ବାଦ ଦିଲାଯାଇଛି।

ଆଜିର
ପାଇଁ

TRI

Urir
bas
this

RAI

EMI

Em
for
med
prop
clea
acti
or th

INC

MA

This
inte

MIN

This
inter
assi
are

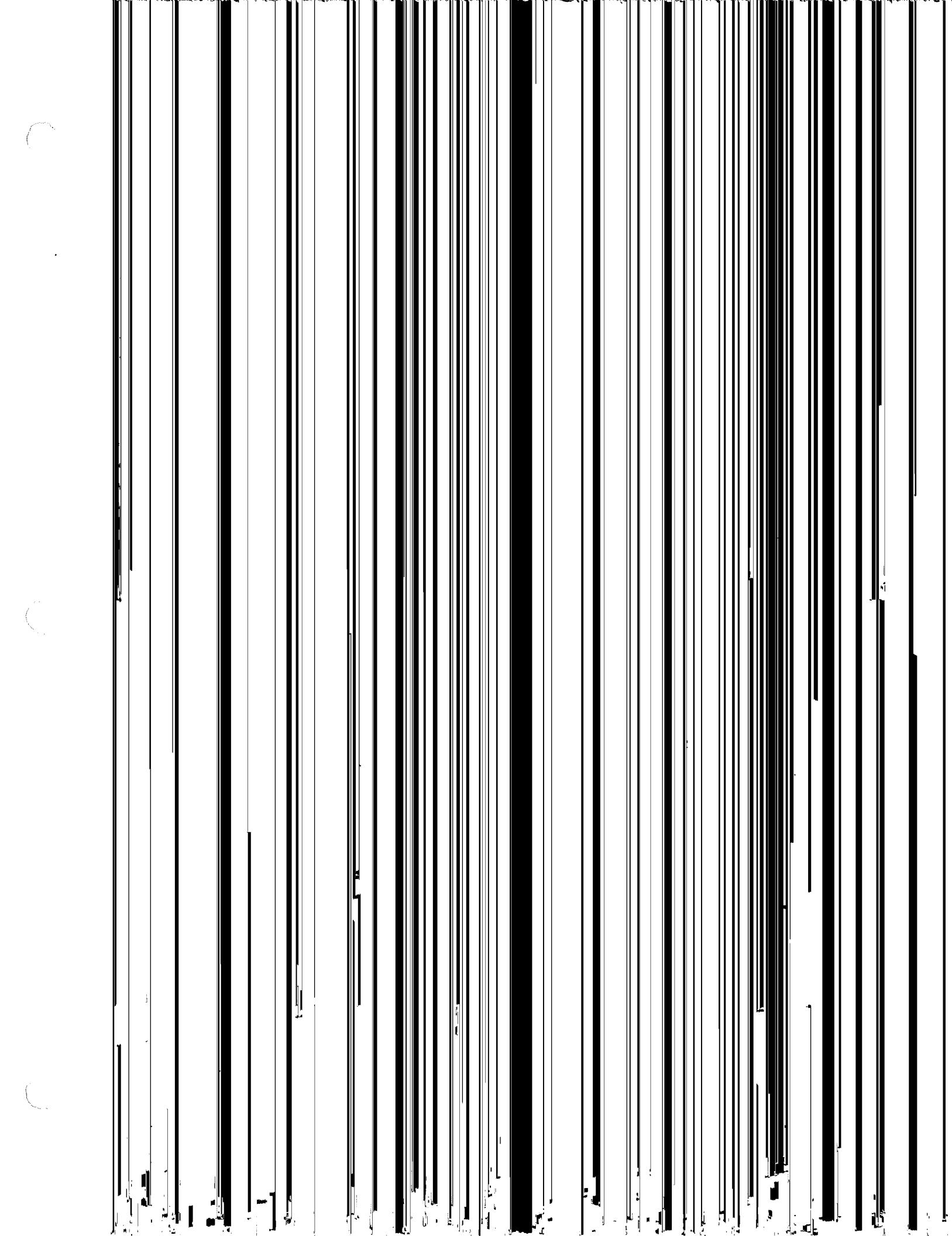
The

INCID
Major

Minor

TOTA

6
6
6
6
4
3
3
3
3
2
1
1
1
1
1
1
9
7



1
E
C
C
V
S
3
v
i
f
f
c
F
A
c
c
k
c
G
N
r
n
c
s
C
T
C
l
a
n
d
w
A
w
t
th

WASTE

Short-Lived
Long-Lived
Scintillation
Animals
Long-Lived
Long-Lived
Non-Sewer
Short-Lived
Sewer
Short-Lived
Non-Sewer

All values
All values
number of
period of
was disp

Ecology
Ecology

The cost
(average
waste su
due to the

WA
GE
Sh
Dry
Lor
Dry
Sci
Via
Ani
Lor
Sev
Lor
Non
Shc
Sev
Shc
Nor

The cont.
one-year
lived dry
due to CC

RECYCLING PROGRAM

The RSOF occasionally obtains laboratory equipment that have either left the University or ceased to use EHS services. These items include containers (lead and Lucite), shielding (lead and Lucite), and other materials offered to the AUs to conserve funds otherwise spent by EHS. This cost saving from these recycling efforts resulted in EHS more than \$1,000 during 2020-2021.

F
T

F
A

P E F A A F V S S E S S E H F C L L C H T J a

R R

I t t

A A D F

Lic
Ra
Se
Se
Se
Se
Su
Va
Wa

Ea
co
pe
pre
qui
con

Ac

An
de
as
(10
mis

RS

Thi

AU

Aut
He

RS

No

Do

An
ver
Val
pic

RS

Re

Irradiator

An audit
irradiators
October 2
compliant

RSOF RE

No respor

Laser Pro

The laser
inventory,
Eight (8) i
follow up

RSOF RE

Emails we
database

Licensing

An audit v
October 2
license, r
radiation c
all license

RSOF RE

No respon

Radiation

Quarterly
examined
change of

RSOF RE:

The X-ray
the CWRL

Sealed Sour

Files verifyin
Ten (10) file

RSOF RESP

No response

Security Che

Verification &
2020. Dr. E
that Dr. San
with a new F

RSOF RESP

No response

Survey Mete

Compliant c
examined by
was notified

RSOF RESP

The one surv

Semi-Annual

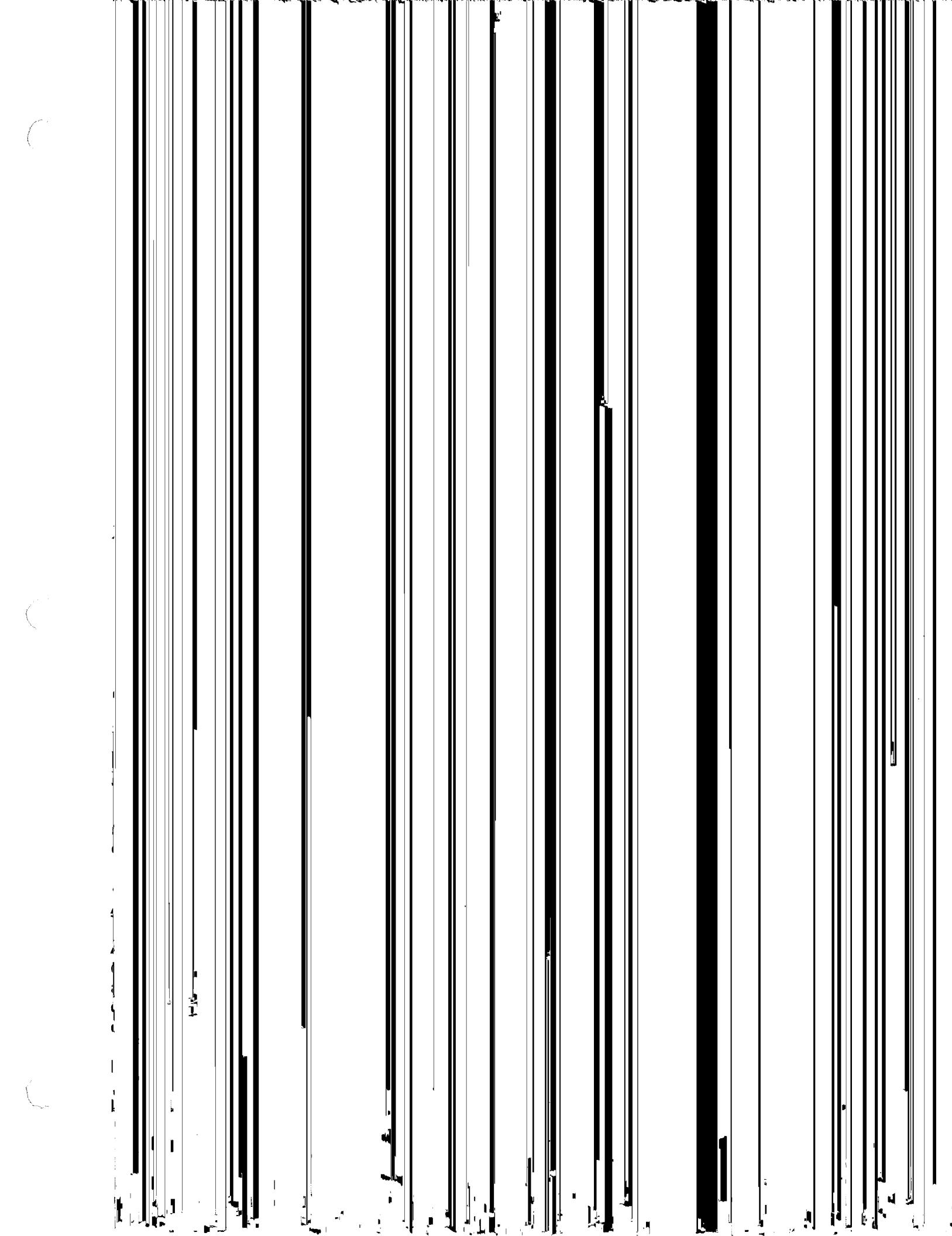
An audit of th
Lee noted th
resolved.

RSOF RESP

No response

Valid RAM A

RAM applica
complete and
training was



Bioassay

An audit
and/or
perform

RSOF F

No resp

Compliance

Compliance
any non
Licatalc
RSOF v

RSOF F

Data er

Direct F

Isotope
Dr. Lic
pickup v

RSOF F

No resp

Dosimeter

An audi
verify th
McCorm

RSOF F

No resp

EHS We

T v v
F N
E A
A fo ir
F N
k D n s
R N
L A J
A J
tr lid
R N
S F T R

R
T
S
V
2
u
R
T
T
S
A
fil
R
R
T
T
S
A
se
st
re
R
T
W
T
sa
the
sto
R
N

In
was
me

AU
Col
Dos
EH
Inci
Irra
Las
Lice
Rad
Seq
Sur
Sup
Val
Wa

Eac
wer

AU/

Aut
safe
whc

RSC

Rer

Con

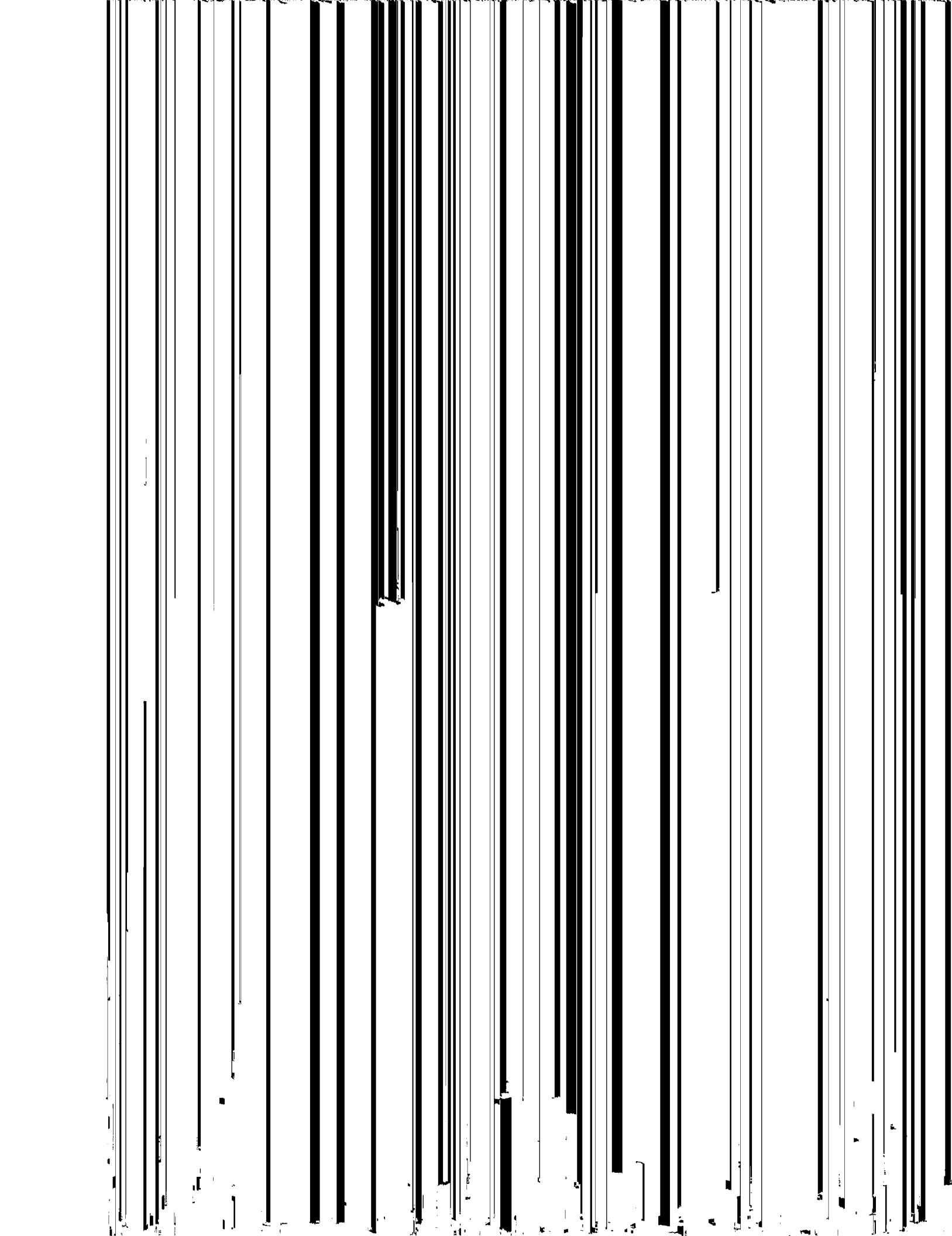
Cor
non
Val
defi

RSC

Bott

Dos

An
that
Lica



Licens

An aud
April 2
waste
radiatio
progra

RSOF

No res

Radiati

Quarte
examir
The RS

RSOF

The X-

Securit

Verifica
2021.
unsecu
follow u

RSOF .

No furtl

Survey

Compli
by Dr. I

RSOF I

No resp

S

Ar
se
re
tw
tra

R

Er
ha

Va

R
an
nc

Rs

Ct

W

Th
en
ins
wa

Rs

Nd

Ov
an
me
co

An

Th
re
Oc
ca

com
of th

The

Anci

An a
files
train
includ
secu

RSC

No r

AU a

An a
train
(17)
conta

RS

Em
dat

Bio

An
and
bee

RS

No

Coi

Col
tha
file:
infc

RS

Bot

Dire

An
pac
auc

RSI

No

Dos

An
wor
6/11
out-

RSI

The

EHS We

Dr. Duval
14, 2021
associat
the webs

RSOF R

The brok

Incident

A review
Duval fo
were a t
documen
missing e

RSOF R

The incid

Irradiator

An audit
irradiator
active or

RSOF R

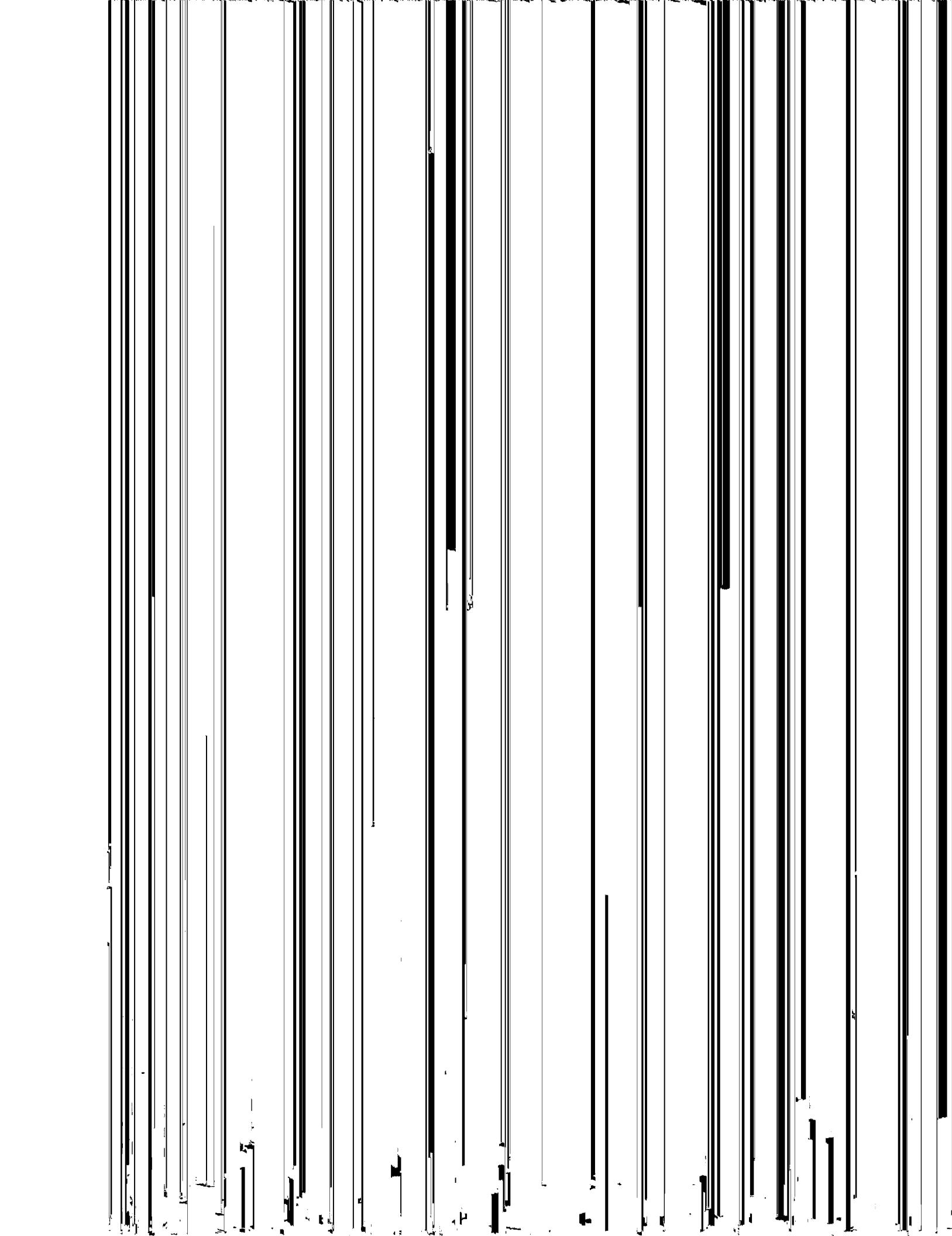
No resp

Isotope C

Dr. McC
(RAM) or
database
question:

RSOF R

The corre



Seale

Files
through
overd

RSOF

One
correct

Radia

Verifi
7/1/20
this p

RSOF

No re

Semi-

An ar
through
questi

RSOF

Four o
two ac

Radia

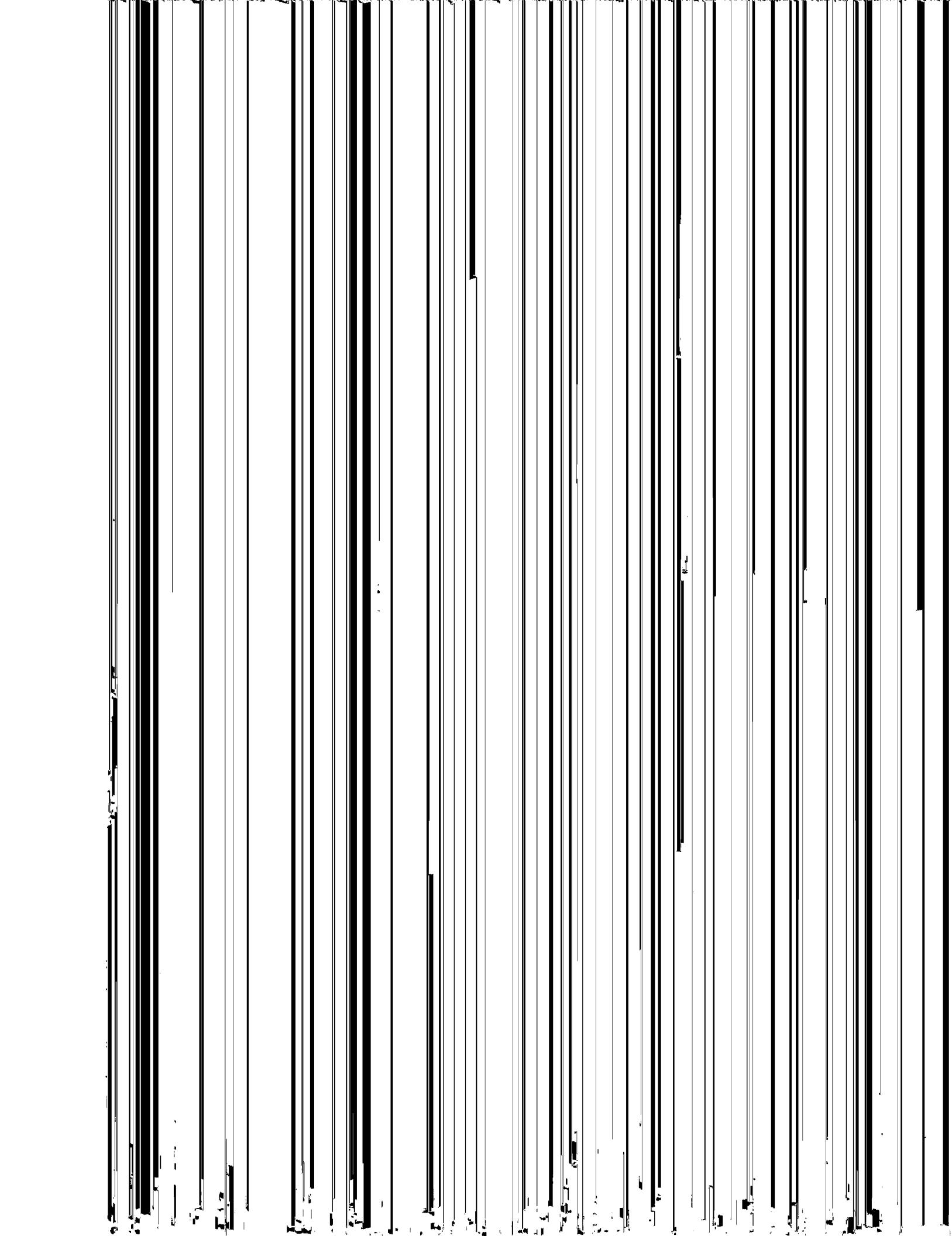
Comp
Fifty (
meter

RSOF

The m

Valid

RAM
appli
deficie



APPENDIX

AUT

RAD
None

STO

Youw
Jona
Chris
Derek
William

RADI

Fu-Si
Vince
Youw
Nels
Jacel

DEP/
Moha

X-RA

AP N
Gary
Syed
Zheng
Supal
Jeffre
Anna
Danie
Steve
Lei Zi

LASE

Ozan
Walter
Diana
Rogel
Brian
Micha
Lydia
McCo
Svetla
Rajes
Danie
Andre
Jonatil
Nicole
Christ

Alan E

Liming

Cl

*

*

*

3,

S

b:

*

*

*

*

*

*

*

*

*

*

*

*

5,

S

b:

*

u,

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*

*



EHS Organizational Chart 2020-2021

