Los Alamos
NATIONAL LABORATORY

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

Date: May 16, 1997
In Reply Refer To: ESH-18/WQ&H:97-0153
Mail Stop: K497
Telephone: (505) 665-1859

Mr. Glenn Saums, Health Program Manager
Surface Water Quality Bureau
New Mexico Environment Department
P.O. Box 26110
Santa Fe, New Mexico 87502

Ms. Marcy Leavett, Chief
Ground Water Protection Bureau
New Mexico Environment Department
P.O. Box 26110
Santa Fe, New Mexico 87502

SUBJECT: NOTICE OF INTENT TO DISCHARGE (NOI). POTABLE WATER FOR DECONTAMINATION OF TOOLS AND PERSONAL PROTECTIVE EQUIPMENT (PPE) AT ENVIRONMENTAL RESTORATION (ER), INTERIM ACTION ACTIVITIES AT LOS ALAMOS NATIONAL LABORATORY.

Dear Mr. Saums and Ms. Leavett:

Enclosed is an NOI, including maps and pertinent data which has been prepared for submittal to the New Mexico Environment Department (NMED). This notification has been requested by the NMED under Section 1201 of the New Mexico Water Quality Control Commission (NMWQCC) regulations. The enclosed NOI is being submitted for coverage of discharge of potable water for decontamination of tools and PPE at ER interim action activities at Los Alamos National Laboratory.

The purpose of this NOI is to provide regulatory coverage under the NMWQCC Regulations for discharges from activities at the Laboratory's ER sites. The NMED has indicated that these types of discharges should be covered in some manner in order to meet regulatory requirements for discharges to the environment.

Please call Harvey Decker (665-2014) or Steve Veenis (665-9735) of the Laboratories Water Quality and Hydrology Group (ESH-18) if you need any additional information.

Sincerely,

Steven R. Rae, Group Leader
Water Quality and Hydrology Group

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MAY 21 1997

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NOTICE OF INTENT

1. Name and address of facility making the discharge.

Gene Gould (Field Unit #2)
Los Alamos National Laboratory
P.O. Box 1663 E525
Los Alamos, New Mexico 87545

2. Location of the discharge (see attached maps).

Discharges will be at various PRSs within Field Unit #2 based on Environmental Restoration activities. These sites include:

15-008(a)	36-004(e)
15-004(f-g)	36-008(f)
15-006(c)	C-36-006(e)
15-008(b-c)	53-002(a)

These de-minimus discharges will be attributable to Interim action activities and will result from procedures such as placing Storm Water run-on/off BMP's and picking up DU shrapnel and other types of debris from ER sites. No soil or surface disturbance will be initiated at these sites during these IA activities.

3. The means of discharge. (to lagoon, flowing stream, water course, arroyo, septic tank, other).

These discharges will result from rinsing tools and Personal Protective Equipment (PPE) using potable water and small amounts of detergent as the rinsate. Measures will be taken to prevent water from channeling. There are no storm water conveyances on-site, so discharges will remain local. No liquid will be discharged in a manner that will impact a water course.

4. The estimated concentration of contaminants (if any) in the discharge.

No contaminants will be introduced on to the site of discharge from the potable water and the small amount of detergent that is used for decontamination purposes. Included are copies of environmental surveillance data from the potable water system for 1996.

5. The type of operation from which the discharge is derived

Decontamination operations will include daily cleaning of hand tools and Personnel Protective Equipment. Water volumes for decontamination purposes will be kept to a minimum by utilizing hand held sprayers and rags.

6. The estimated flow to be discharged.

The estimated volume of flow to be discharged is not expected to exceed 20 gallons per day per site. There are approximately ten sites that will undergo IA's in 1997/98. A maximum of 3 sites will be active on any given day, with a maximum completion of ten days for each site. Based on this information it is estimated that approximately 60 gallons per day for 65 work days each year may be discharged site-wide.

7. The estimated depth to Ground-Water (if available)

The depth to the regional aquifer is approximately 800 to 1000 feet.

Signed: _____ Date: May 16, 1997
Group Leader, ESH-18

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Table XX.XX Total Trihalomethanes in Drinking Water (µg/L)

	1996 Quarters			
Sample Location	First	Second	Third	Fourth
DISTRIBUTION SITES				
LA Airport	2.20	5.50	8.00	11.60
WR Fire Station	< 0.50	< 0.50	< 0.50	< 0.50
North Community Fire Station	2.30	7.00	5.70	4.20
S-Site Fire Station	< 0.50	< 0.50	5.50	0.70
Barranca Mesa School	1.30	1.10	7.70	1.00
TA-33, Bldg. 114	2.40	7.50	NST	NST
TA-39, Bldg. 02	NST	NST	NST	8.70

1996 Average 3.71 µg/L

EPA MCL (Maximum Contaminant Level) 100.00 µg/L
Sample Detection Limit (SDL) 0.50 µg/L
NST=No sample taken.

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Table XX.XX Inorganic Constituents in Drinking Water (mg/L)

Sample Location	As	Ba	Be	Cd	Cr	F	CN	Hg	Ni	NO3 (as N)	Se	Sb	Tl
ENTRY POINTS													
Pajarito Booster #2	<0.002	<0.1	<0.002	<0.001	0.0040	0.30	<0.02	<0.0002	<0.02		<0.005	<0.001	<0.001
Guaje Booster #2	0.0120	<0.1	<0.001	<0.001	0.0040	0.50	<0.02	<0.0002	<0.02		<0.01	<0.001	<0.001
Pajarito Well Field-PM1	<0.002	<0.1	<0.002	<0.001	0.0030	0.20	<0.02	<0.0002	<0.02		<0.005	<0.001	<0.001
Pajarito Well Field-PM3	<0.002	<0.2	<0.002	<0.002	0.0030	0.30	<0.02	<0.0002	<0.02		<0.005	<0.002	<0.002
Los Alamos Booster #4	<0.002	<0.1	<0.002	<0.001	0.0030	0.30	<0.02	<0.0002	<0.02		<0.005	<0.001	<0.001
WELLHEADS													
Pajarito Well Field-PM1										0.50			
Pajarito Well Field-PM2										0.30			
Pajarito Well Field-PM3										0.40			
Pajarito Well Field-PM5										0.30			
Guaje Well Field-G1A										0.40			
Guaje Well Field-G1										0.40			
Guaje Well Field-G2										0.40			
Guaje Well Field-G4										0.60			
Guaje Well Field-G5										0.70			
Guaje Well Field-G6										0.50			
Otowi Well Field-O4										0.40			
EPA MCLs	0.05	2.00	0.004	0.005	0.10	4.00	0.20	0.002	0.1	10.00	0.05	0.006	0.002

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Table XX.XX. Radioactivity in Drinking Water (pCi/L)

Sample Location	Gross Alpha			Gross Beta		
	Calibration Std.	Value	(Uncertainty)	Calibration Std.	Value	(Uncertainty)
ENTRY POINTS						
Pajarito Booster #2	Am-241	0.50	(0.30)	Cs-137	2.90	(1.00)
	Natural uranium	0.50	(0.40)	Sr-90, Y-90	2.80	(1.00)
Guaje Booster #2	Am-241	1.20	(0.40)	Cs-137	3.40	(0.90)
	Natural uranium	1.30	(0.40)	Sr-90, Y-90	3.40	(0.90)
Pajarito Well Field-PM1	Am-241	2.00	(0.60)	Cs-137	3.60	(0.90)
	Natural uranium	2.40	(0.60)	Sr-90, Y-90	3.40	(0.80)
Pajarito Well Field-PM3	Am-241	1.60	(0.60)	Cs-137	3.40	(1.10)
	Natural uranium	1.80	(0.60)	Sr-90, Y-90	3.20	(1.00)
Los Alamos Booster #4	Am-241	1.10	(0.50)	Cs-137	3.20	(1.10)
	Natural uranium	1.30	(0.50)	Sr-90, Y-90	3.00	(1.10)
EPA Maximum Contaminant Level		15.00			NA	
EPA Screening Level		5.00			50.00	

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Table XX.XX. Volatile Organic Constituents in Drinking Water (µg/L)

Sample Location	VOC Group I 62 Compounds
ENTRY POINTS	
Pajarito Booster #2	N
Guaje Booster #2	N
Pajarito Well Field-PM1	N
Pajarito Well Field-PM3	N
Los Alamos Booster #4	N

N = None detected above the Sample Detection Limit (SDL).

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Table XX.XX. Lead and Copper in Drinking Water at Residential Taps

VALUES	LEAD		COPPER	
Values less than or equal to Detection limit	33	samples	19	samples
Values Detectable but less than Action Level	1	samples	15	samples
Values greater than Action Level	0	samples	0	samples
Totals	34	samples	34	samples
Sample Detection Limit (SDL)	5	µg/L	50	µg/L
90th Percentile Value	<5.0	µg/L	90	µg/L
EPA Action Level	15	µg/L	1300	µg/L

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Table XX.XX. Radon in Drinking Water (pCi/L)

Sample Location	Value	(Uncertainty)
ENTRY POINTS		
Pajarito Booster #2	520.	(29)
Guaje Booster #2	226.	(17)
Pajarito Well Field-PM1	278.	(18)
Pajarito Well Field-PM3	357.	(23)
Los Alamos Booster #4	491.	(29)
WELL HEADS		
Pajarito Well Field-PM1	278.	(18)
Pajarito Well Field-PM2	616.	(35)
Pajarito Well Field-PM3	357.	(23)
Pajarito Well Field-PM5	446.	(27)
Otowi Well Field-O4	512.	(30)
Guaje Well Field-G1A	381.	(23)
Guaje Well Field-G1	349.	(22)
Guaje Well Field-G2	392.	(24)
Guaje Well Field-G4	361.	(23)
Guaje Well Field-G5	464.	(28)
Guaje Well Field-G6	423.	(25)
Proposed EPA Maximum Contaminant Level	300.	

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Table XX.XX. Bacteria in Drinking Water at Distribution System Taps

Month	No. of Samples Collected	No. of Positive Tests		
		Coliform	Fecal Coliform	Non-Coliform
Jan-96	45	0	0	0
Feb-96	46	0	0	0
Mar-96	45	0	0	3
Apr-96	46	0	0	1
May-96	46	0	0	2
Jun-96	47	0	0	0
Jul-96	44	0	0	2
Aug-96	46	0	0	1
Sep-96	46	0	0	3
Oct-96	46	0	0	3
Nov-96	45	0	0	1
Dec-96	45	0	0	0
Total 1996	547	0	0	16
Maximum Contaminant Level		a.	b.	c.

a. The MCL for Coliforms is positive samples not to exceed 5% of the monthly total.

b. The MCL for Fecal Coliforms is no coliform positive repeat samples following a fecal coliform positive sample.

c. There is no MCL for Non-Coliforms.

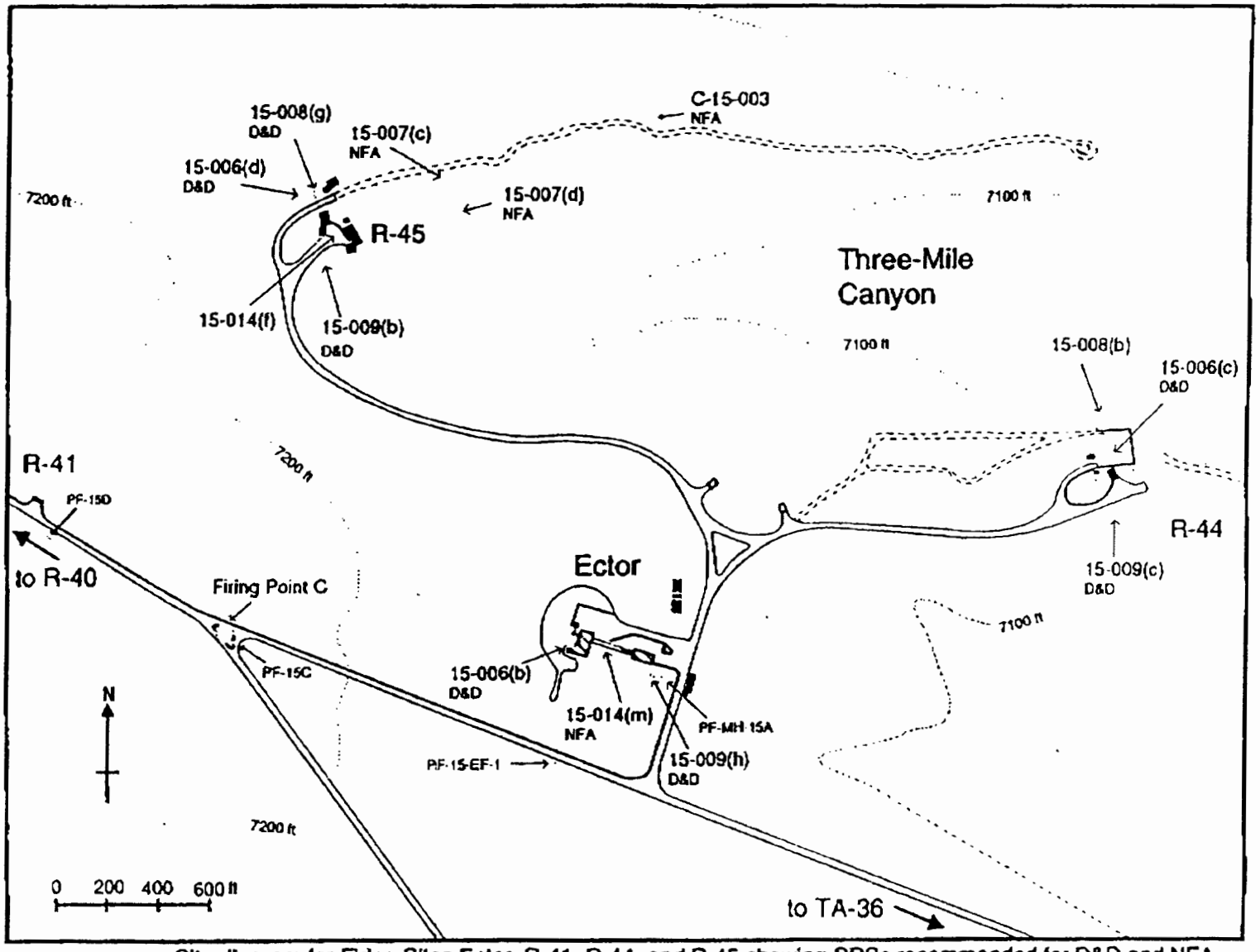


Figure 6.3-1 Site diagram for Firing Sites Ector, R-41, R-44, and R-45 showing PRSs recommended for D&D and NFA and and SWMU 15-008(b).

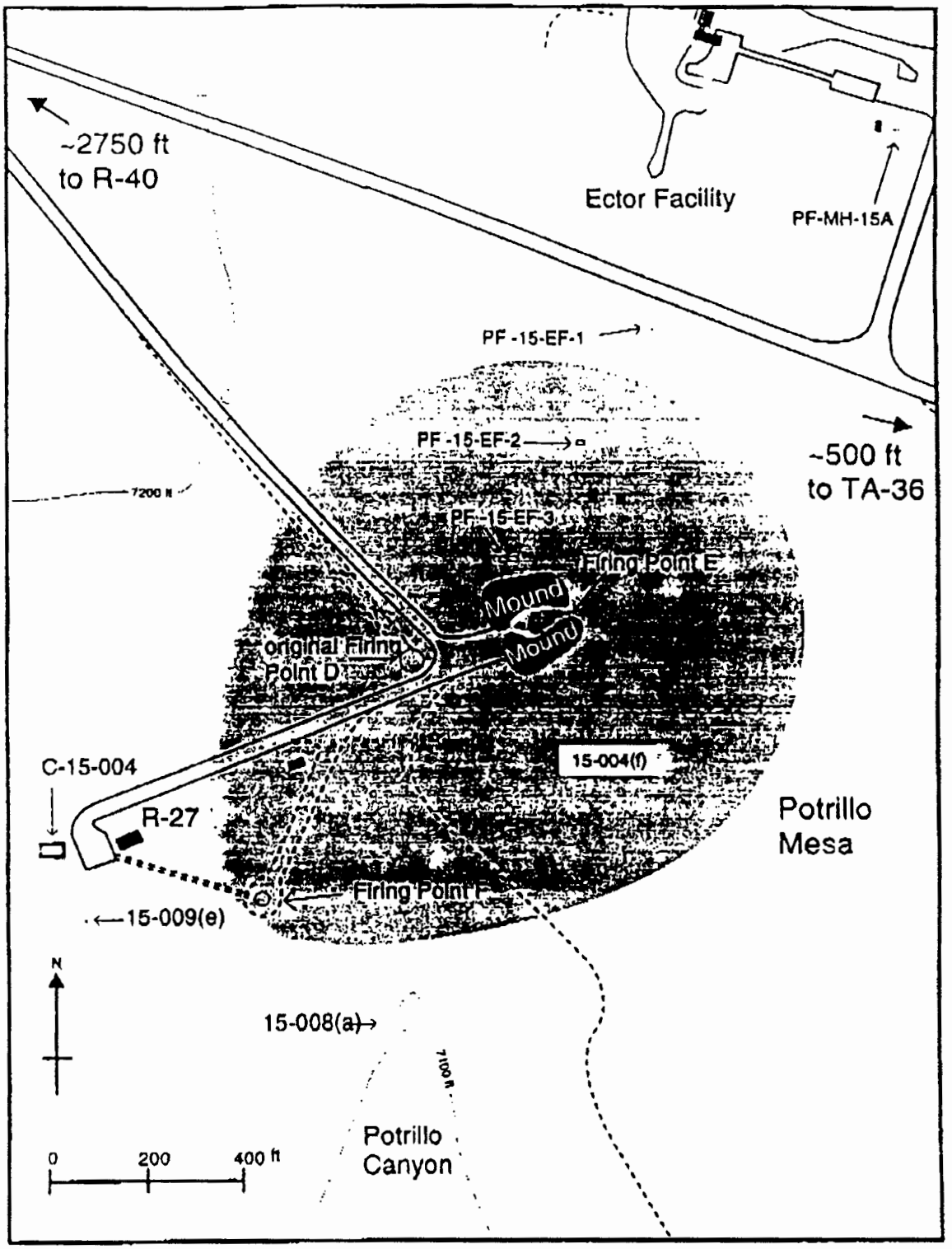


Figure 7.3-1 Site diagram for Firing Site E-F; shaded area shows SWMU 15-004(f).

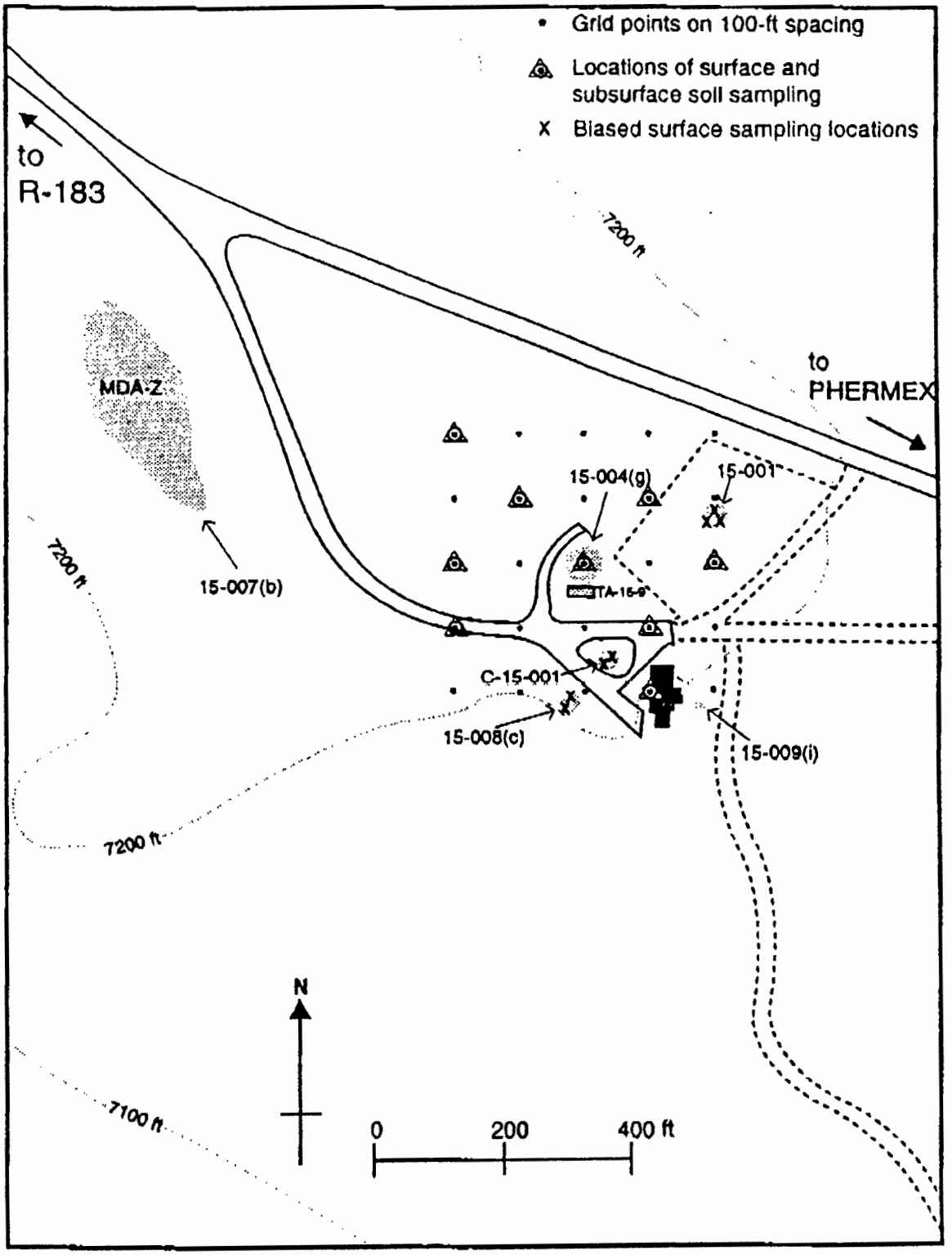


Figure 8.5-1 Site diagram and sampling grid for Firing Site G at TA-15.

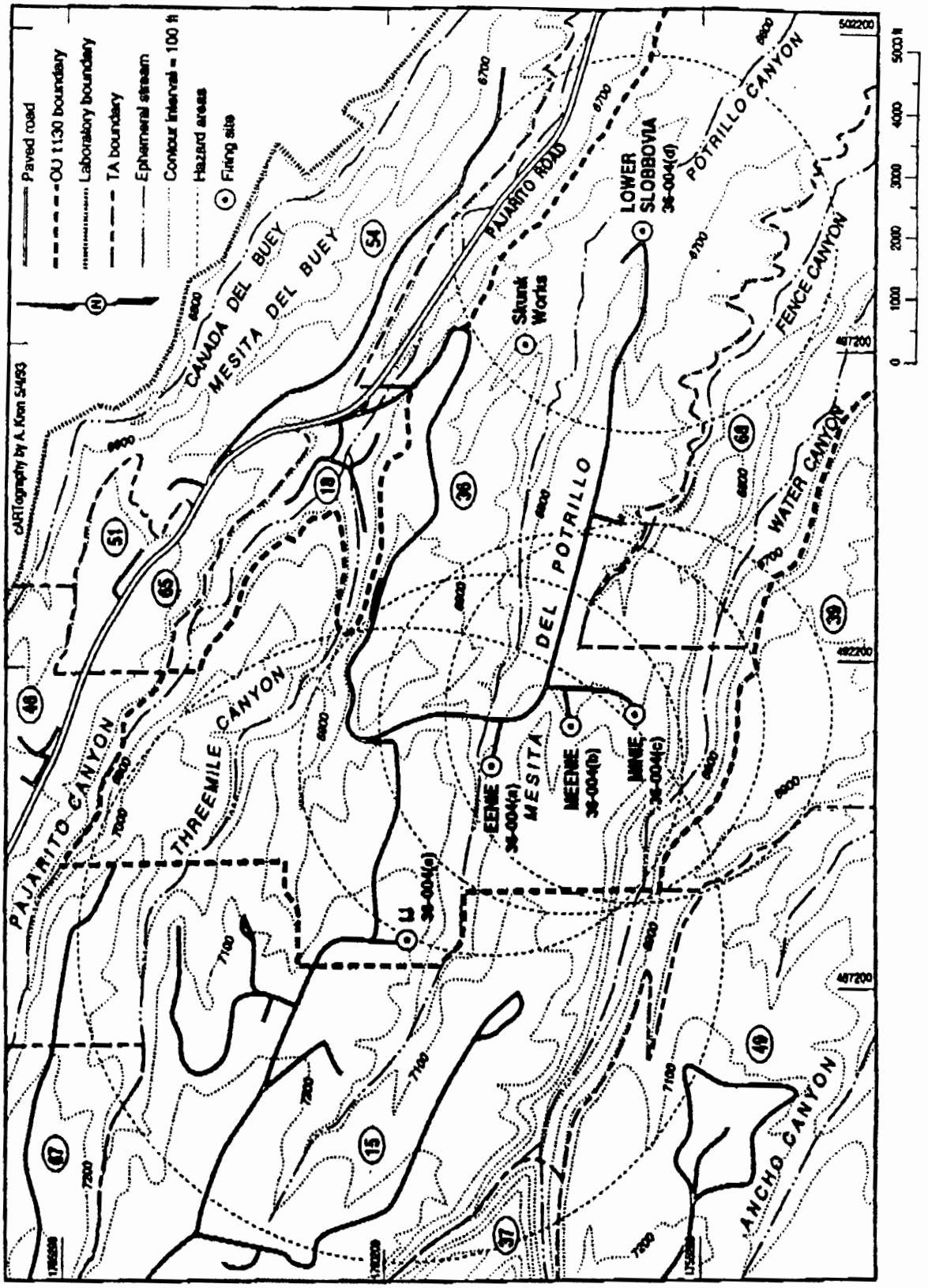


Figure 5-7. Location of the firing sites and associated PRSs and hazard areas for OU 1130.

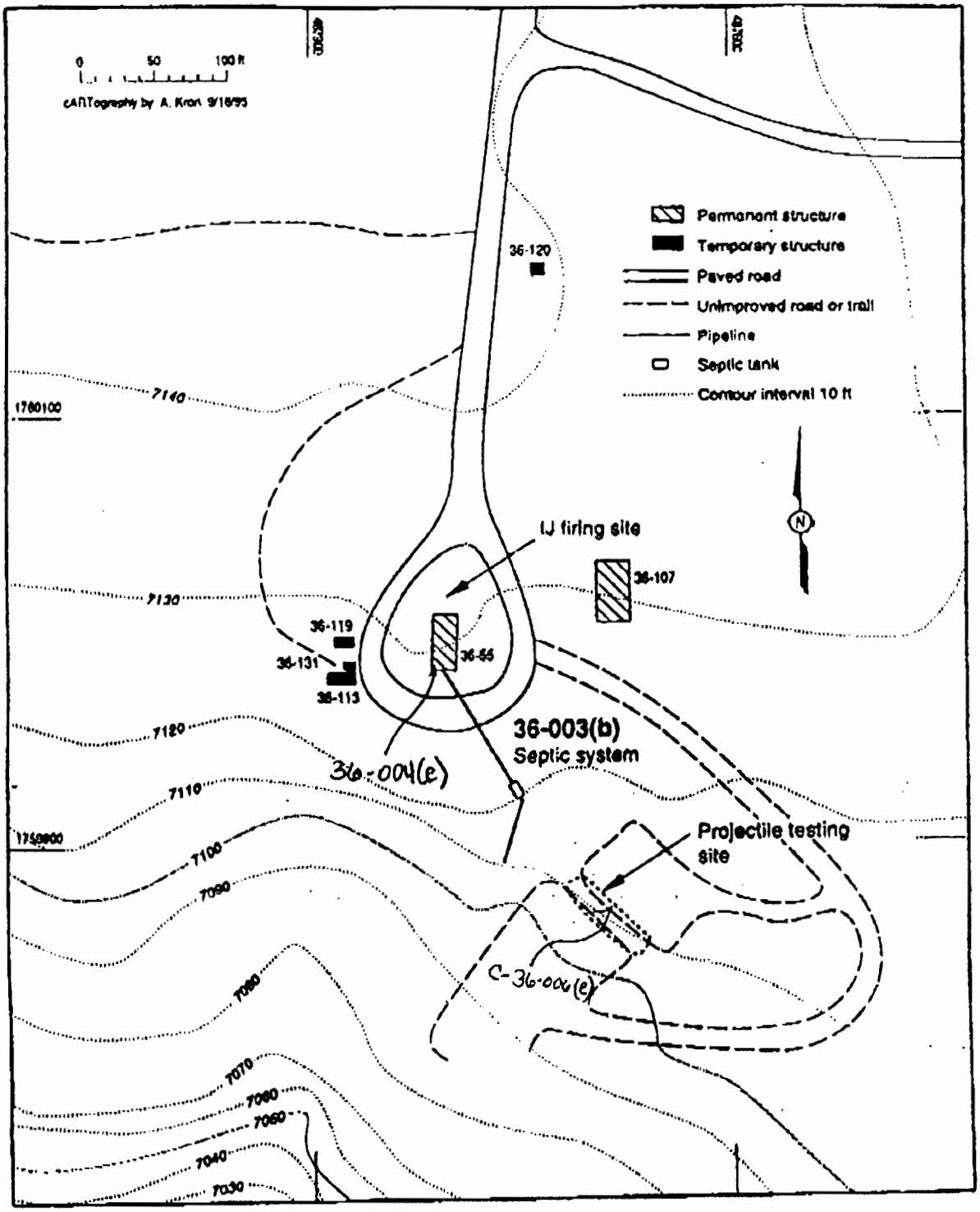
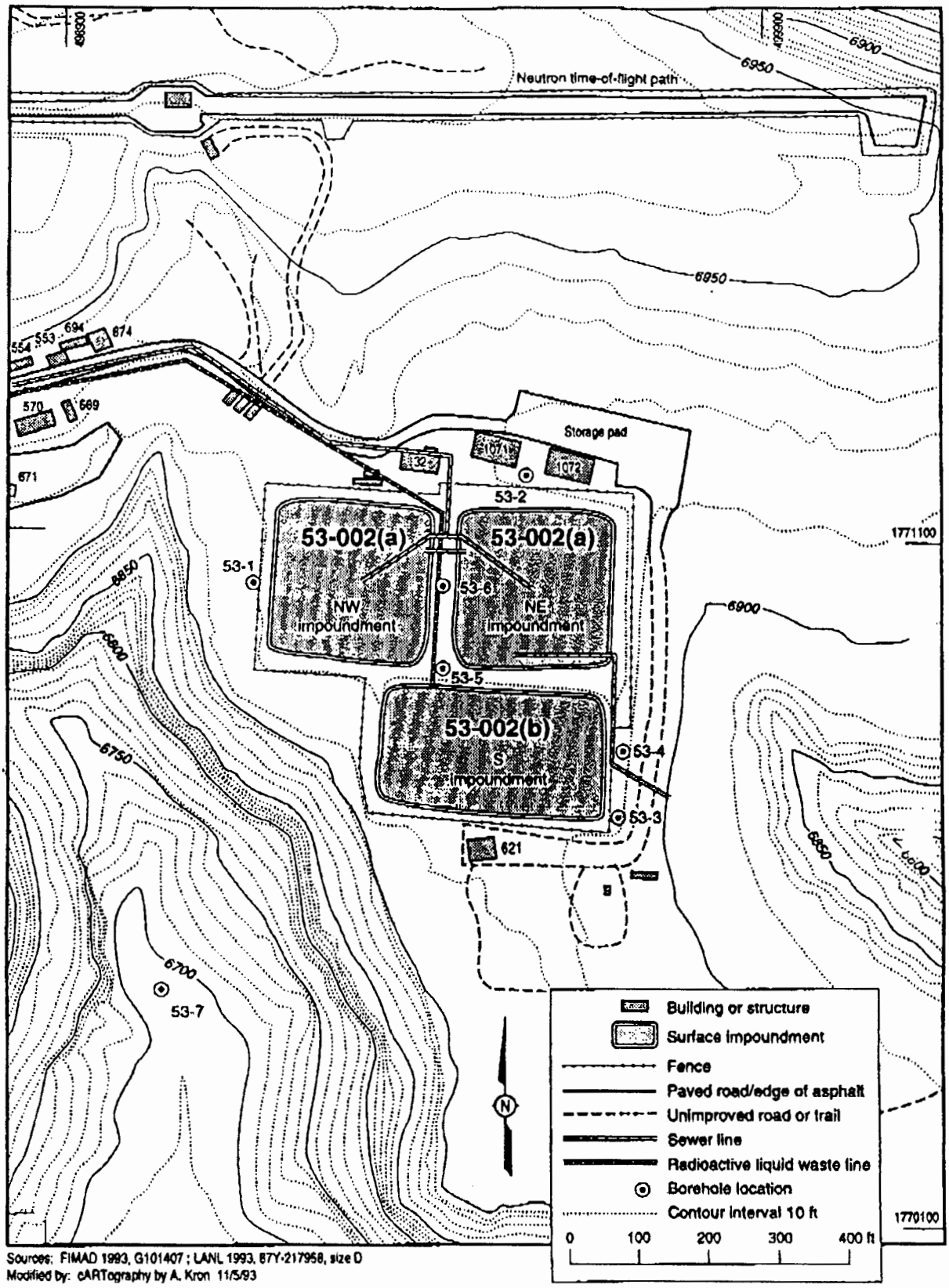


Figure 1-2. Location of PRS 36-003(b) at I-J Firing Site.



Sources: FIMAD 1993, G101407 ; LANL 1993, 87Y-217958, size D
Modified by: cARTography by A. Kron 11/5/93

Figure 6-2. Layout of PRS 53-002 impoundments.

State of New Mexico
ENVIRONMENT DEPARTMENT
Harold Runnels Building
1190 St. Francis Drive, P.O. Box 26110
Santa Fe, New Mexico 87502
(505) 827-0187

GARY E. JOHNSON
GOVERNOR

MARK E. WEIDLER
SECRETARY

EDGAR T. THORNTON, III
DEPUTY SECRETARY

TELECOPIER TRANSMITTAL

DATE: 5/22 TIME: _____ PAGE: 1 OF: 18

PLEASE DELIVER THE FOLLOWING TO:

TO: Sta. Dinwiddie
LOCATION: HRMB
TELEPHONE NUMBER: X 1561
TELECOPIER NUMBER: 827-1544

FROM: Glenn Saums
LOCATION: SWQB
TELEPHONE NUMBER: X 2827
TELECOPIER NUMBER: 827-0160

COMMENTS:
Sta, FYI -- in the past I have heard discussion that these discharges may be covered by RCRA -- since you did not receive a copy I'm sending it over.
— Glenn