

Fermilab**Radiological Work Permit No. AD-22-059**

Area Name

Tevatron F-Sector

Permit Type General

Issue Date Jan 26, 2022

Issue Time 11:08 AM

Expiration Date Jan 31, 2023

Description of WorkAll work, tours, and inspections **EXCEPT FOR:**

1. Cutting, drilling, or grinding on radioactive material
2. Work in areas posted as High Radiation and/or Contamination areas
3. Work on beam pipes and magnet interface areas. See "Special Requirements."

Access Type

- Controlled Access
- Supervised Access
- Open Access
- Other - Secured Area
- N/A

Basic Work Area Conditions

See Enclosure Hazards Specification Sheet

Additional Work Area Conditions**Area Posting**

Radiation Area

Time Limits

None

Dose Limits

100 mrem per week and 1500 mrem per year are administrative control limits

Work Documents

Job-specific HAs as applicable, see supervisor or DSO

Dosimetry Requirements

- None Required
- Dosimetry Badge
- Pocket Dosimeter
- Ring Badge
- Digidose
- See Special Requirements

Basic Training Requirements

Radiological Worker

Other Training Requirements**Portable Survey Instruments**

- None Required
- LSM
- Ludlum 14C
- E140N/Portable Frisker
- Minimeter
- Teletector
- Bicron Analyst
- See Special Requirements

Minimum Personal Protective Equipment

- None Required
- Gloves
- Shoecovers
- Labcoats
- Coveralls
- Hood
- Eye Protection
- Respiratory Protection
- See attached instructions
- See special requirements

Additional Instructions

- Notify ESH&Q Prior to Work
- Rad Tech Coverage Required
- Review Survey Map
- Pre-Job Briefing
- Personal Frisk on Exit
- Survey & Label Materials on Exit
- Post-Job De-Briefing
- No Eating, Drinking, Smoking
- See Special Requirements

SPECIAL REQUIREMENTS

Contact MCR to request RSO approval **prior** to working in any posted High Radiation (100 mrem/hr or greater) and/or Contamination Areas. There is always a potential for contamination on beampipes and in magnet interface areas, therefore before removing any material from such areas, contact Radiation Safety for additional guidance.

Prepared By Ben Russell

RSO Authorization

Ben Russell

This Survey is part of the F-Sector survey package. See attached cover sheet for surveyor, instrument, and review information.

F-SECTOR COVER SHEET

Updated 6/13/19

MAPS INCLUDED

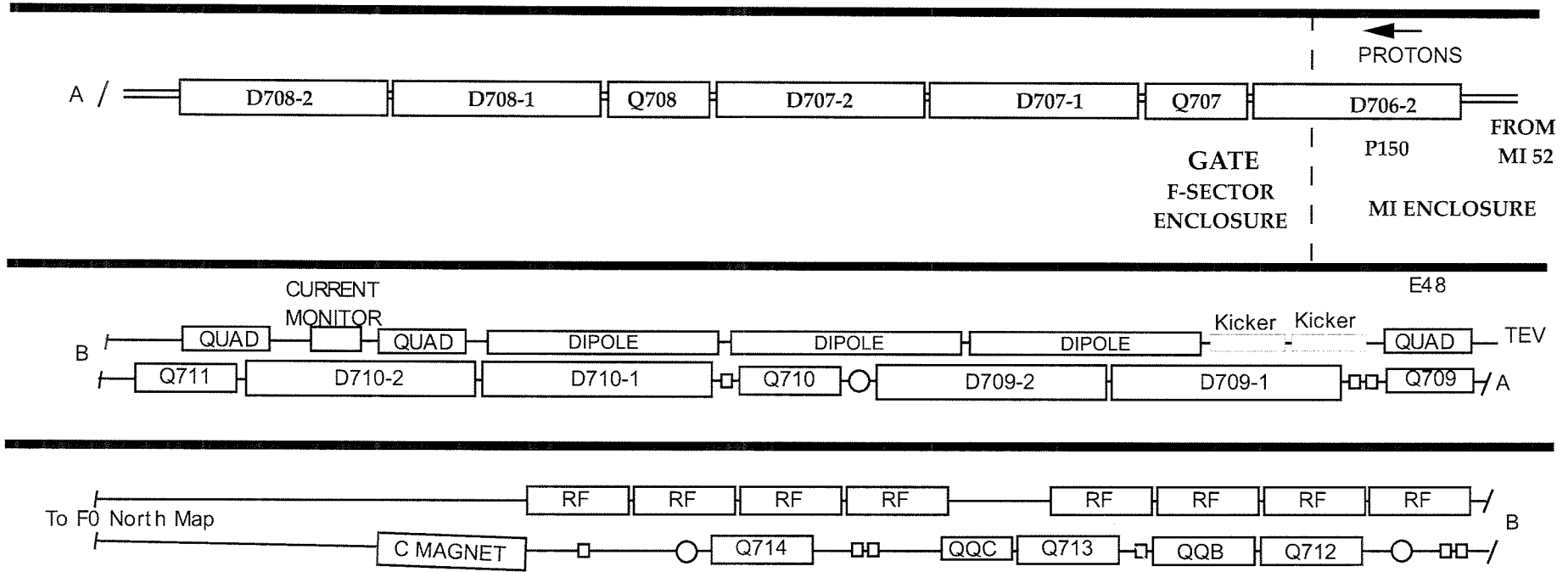
- F-0 SOUTH END
- F-0 NORTH END
- F- SECTOR MAP 1
- F-SECTOR MAP 2
- F-SECTOR MAP 3
- F-SECTOR MAP 4
- F-SECTOR MAP 5
- F-SECTOR MAP 6

Beam Off Date: 4-6-22	Beam Off Time: 0600	Intensity: 86eV 1.47 E17 ppk 120 3.06 E13 ppk	Highest Dose Rate Found: 20 mR/hr @ 1foot	
Radiation Instruments Used		Bkgd 30 cpm Wipe # Reading Wipe # Reading 1 0 ccpm ccpm _____ ccpm _____ ccpm _____ ccpm _____ ccpm _____ ccpm _____ ccpm _____ ccpm _____ ccpm _____ ccpm _____ ccpm	Comments: Surveyed By: Fulgham/Robt. Scott 1003 Reviewed By: <i>[Signature]</i>	
Inst Type: LSM	Picker			
Inst No: 77	61			
Batt/Source Chk: SAT/SAT	NA/SAT			
Cal. Due Date: Apr-22	Jan-23			
All Areas < 5 mR/hr@1foot (Unless otherwise indicated)				
LEGEND: Numbers appearing on map are mR/hr @ 1 ft readings unless denoted with symbols below. * = mR/hr @ contact A = Air Sample # = Wipe F# = Floor wipe				

DATE:	TIME:	PURPOSE:	RWP #
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F Ø - SOUTH END

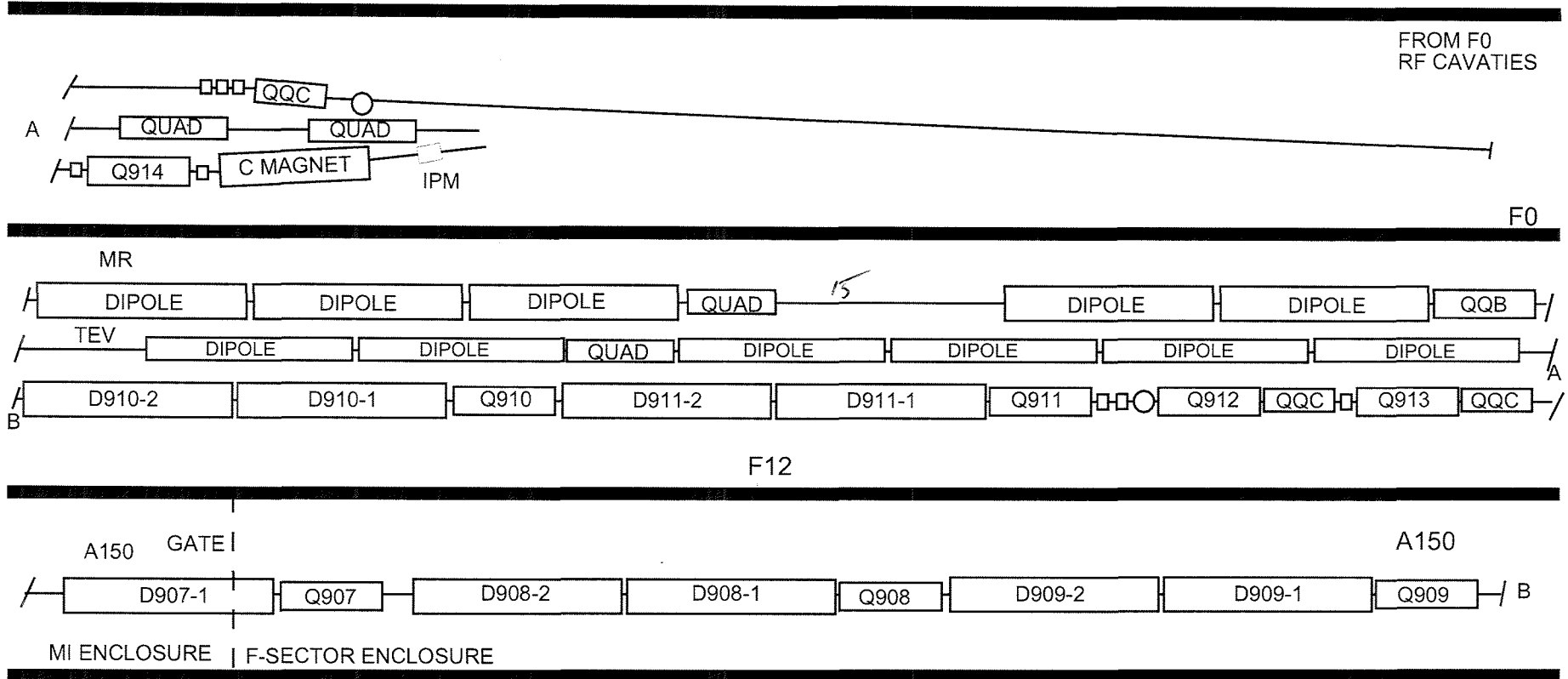


Beam Off Date:	Beam Off Time:	Intensity:	Highest Dose Rate Found: <u>LS</u> mR/hr @ 1foot
Radiation Instruments Used		Bkgd _____ cpm Wipe : Reading Wipe : Reading _____ ccpm _____ ccpm _____ ccpm _____ ccpm _____ ccpm _____ ccpm _____ ccpm _____ ccpm _____ ccpm _____ ccpm	Comments: Surveyed By: _____ Reviewed By: _____
Inst Type: _____	_____		
Inst No: _____	_____		
Batt/Source Chk: _____	_____		
Cal. Due Date: _____	_____		
All Areas < <u>LS</u> mR/hr@1foot (Unless otherwise indicated)		LEGEND: Numbers appearing on map are mR/hr @ 1 ft readings unless denoted with symbols below. * = mR/hr @ contact A = Air Sample (#) = Wipe (F#) = Floor wipe	

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F Ø - NORTH END



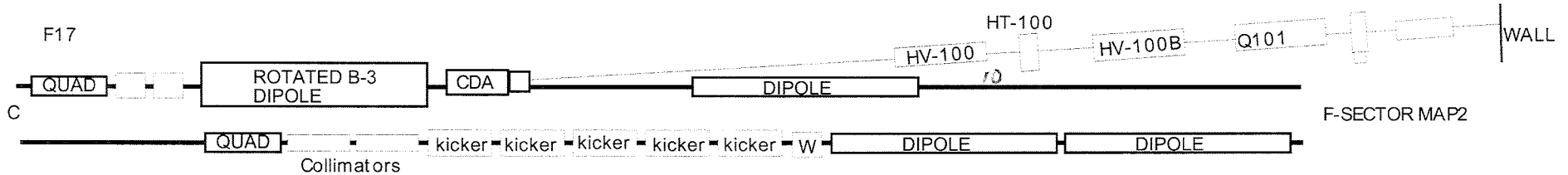
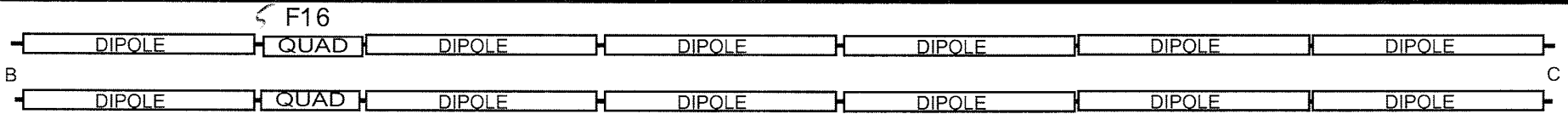
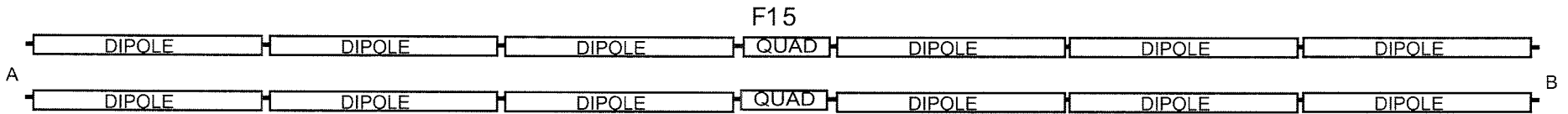
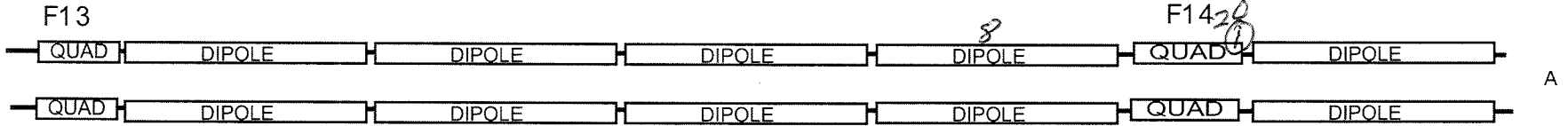
Beam Off Date:	Beam Off Time:	Intensity:	Highest Dose Rate Found: <u>15</u> mR/hr @ 1foot	
Radiation Instruments Used			Comments: Surveyed By: _____ Reviewed By: _____	
Inst Type: _____	_____	_____		Bkgd _____ cpm
Inst No: _____	_____	_____		Wipe # Reading Wipe # Reading
Batt/Source Chk: _____	_____	_____		_____ ccpm _____ ccpm
Cal. Due Date: _____	_____	_____		_____ ccpm _____ ccpm
All Areas < <u>5</u> mR/hr@1foot (Unless otherwise indicated)			_____ ccpm _____ ccpm	
LEGEND: Numbers appearing on map are mR/hr @ 1 ft readings unless denoted with symbols below. * = mR/hr @ contact			_____ ccpm _____ ccpm	
A = Air Sample (#) = Wipe (F#) = Floor wipe			_____ ccpm _____ ccpm	

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F- SECTOR MAP 1

PROTONS →

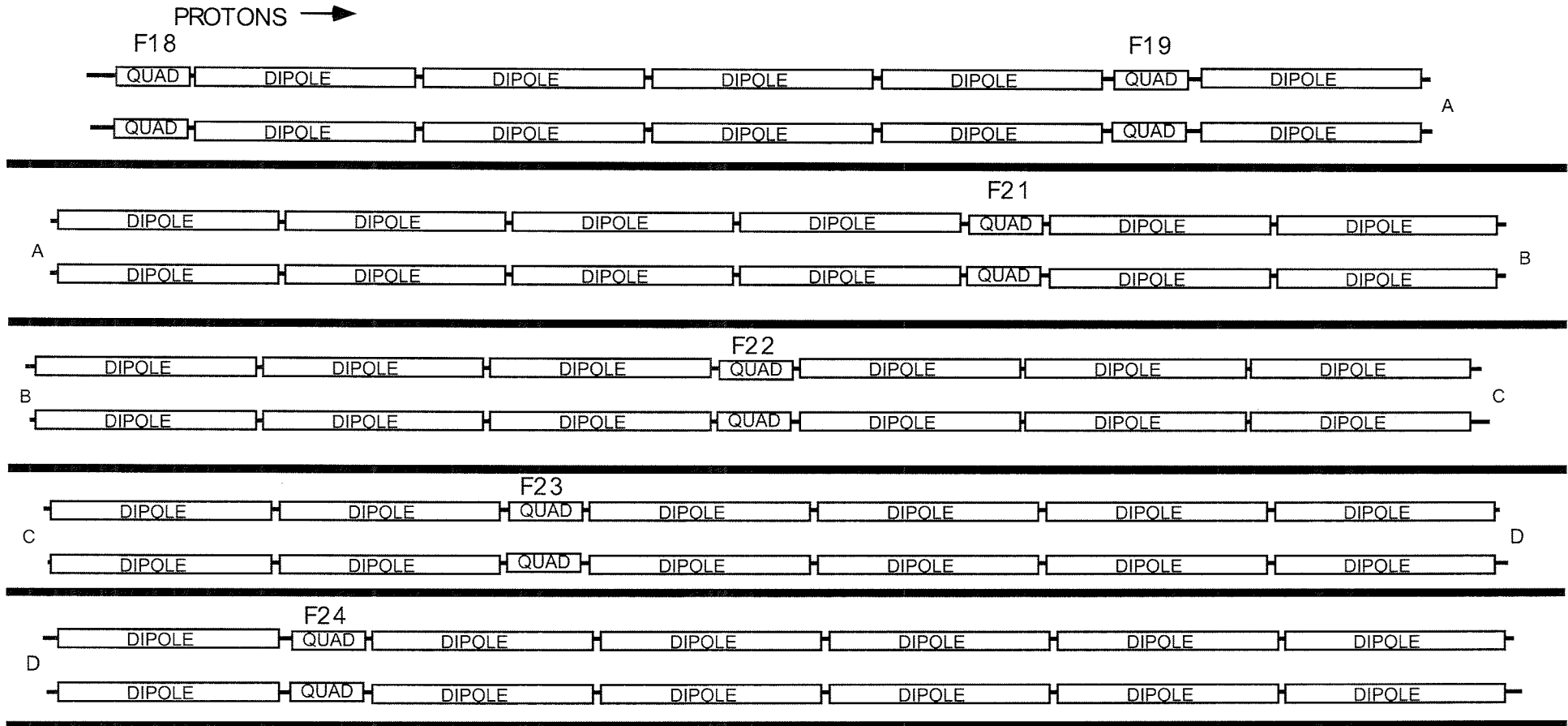


Beam Off Date:	Beam Off Time:	Intensity:	Highest Dose Rate Found: <u>20</u> mR/hr @ 1foot
Radiation Instruments Used			Comments: Surveyed By: _____ Reviewed By: _____
Inst Type: _____	_____	Bkgd <u>30</u> cpm	
Inst No: _____	_____	Wipe # Reading Wipe # Reading	
Batt/Source Chk: _____	_____	<u>1</u> <u>0</u> ccpm _____ ccpm	
Cal. Due Date: _____	_____	_____ ccpm _____ ccpm	
All Areas < Σ mR/hr@1foot (Unless otherwise indicated)			
LEGEND: Numbers appearing on map are mR/hr @ 1 ft readings unless denoted with symbols below. * = mR/hr @ contact			
A = Air Sample (#) = Wipe (F#) = Floor wipe			

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F- SECTOR MAP 2



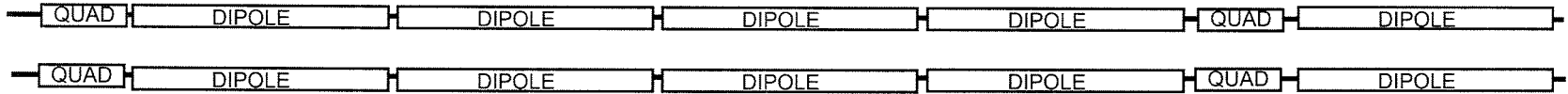
Beam Off Date:	Beam Off Time:	Intensity:	Highest Dose Rate Found: <u>45</u> mR/hr @ 1foot	
Radiation Instruments Used		Bkgd _____ cpm	Comments:	
Inst Type: _____	_____			Wipe # Reading Wipe # Reading
Inst No: _____	_____			
Batt/Source Chk: _____	_____			_____ _____ _____ _____
Cal. Due Date: _____	_____			_____ _____ _____ _____
All Areas < <u>5</u> mR/hr@1foot (Unless otherwise indicated)		_____ _____ _____ _____		
LEGEND: Numbers appearing on map are mR/hr @ 1 ft readings unless denoted with symbols below. * = mR/hr @ contact		_____ _____ _____ _____	Surveyed By: _____	
A = Air Sample (#) = Wipe (F#) = Floor wipe		_____ _____ _____ _____	Reviewed By: _____	

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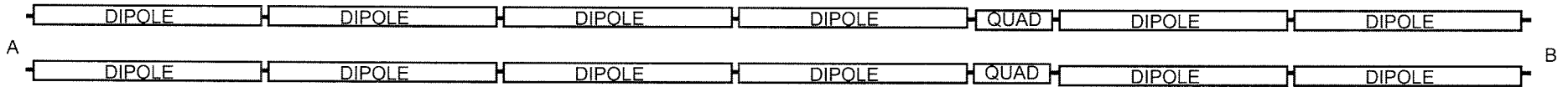
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F- SECTOR MAP 3

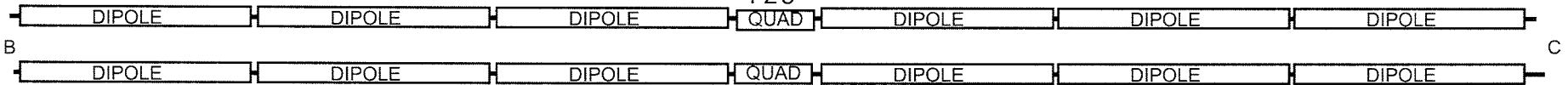
PROTONS →
F25



F27



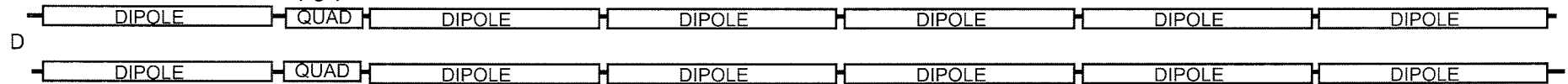
F28



F29



F31



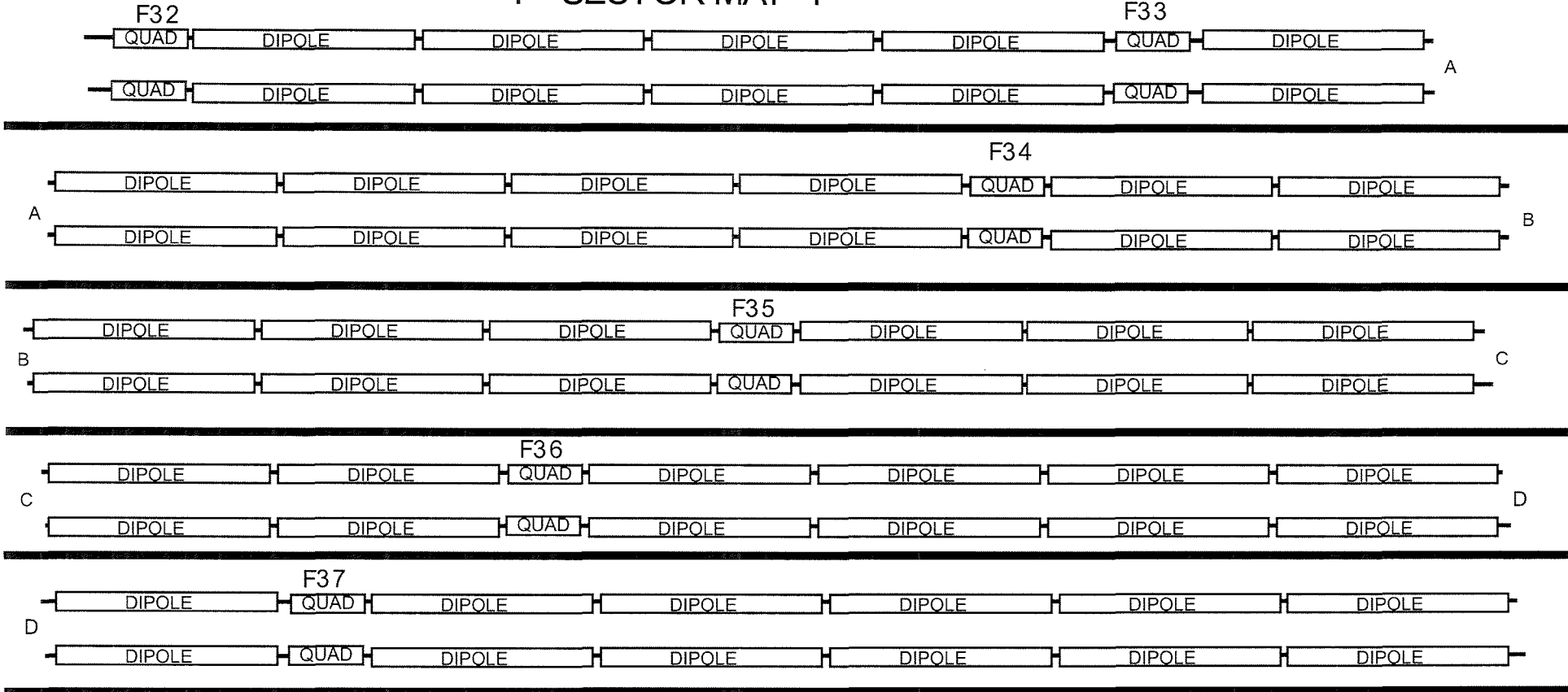
Beam Off Date:	Beam Off Time:	Intensity:	Highest Dose Rate Found: <u>45</u> mR/hr @ 1foot	
Radiation Instruments Used			Comments: Surveyed By: _____ Reviewed By: _____	
Inst Type: _____	_____	_____		Bkgd _____ cpm
Inst No: _____	_____	_____		Wipe = Reading Wipe = Reading
Batt/Source Chk: _____	_____	_____		_____ ccpm _____ ccpm
Cal. Due Date: _____	_____	_____		_____ ccpm _____ ccpm
All Areas < <u>5</u> mR/hr@1foot (Unless otherwise indicated)			_____ ccpm _____ ccpm	
LEGEND: Numbers appearing on map are mR/hr @ 1 ft readings unless denoted with symbols below. * = mR/hr @ contact A = Air Sample (#) = Wipe (F#) = Floor wipe			_____ ccpm _____ ccpm	
			_____ ccpm _____ ccpm	

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PROTONS →

F- SECTOR MAP 4



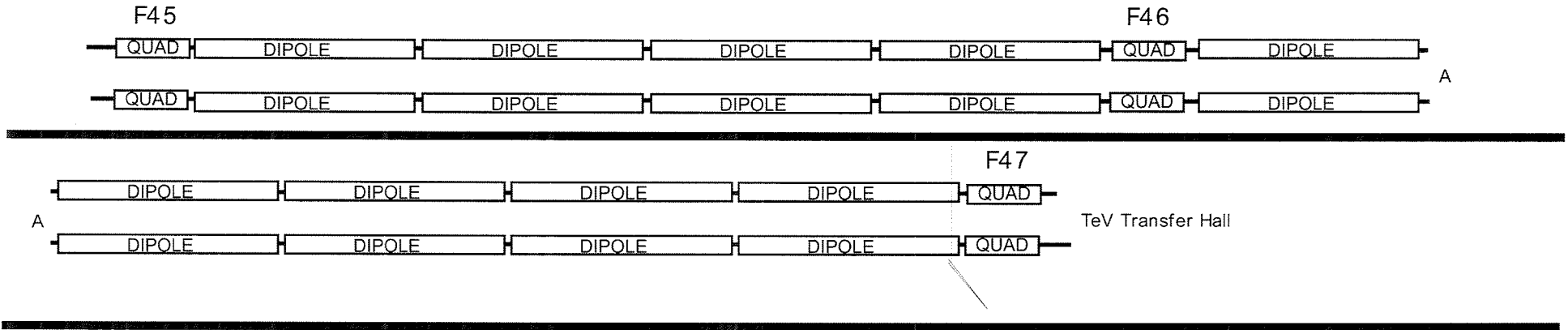
Beam Off Date:	Beam Off Time:	Intensity:	Highest Dose Rate Found: <u>LS</u> mR/hr @ 1foot
Radiation Instruments Used		Bkgd _____ cpm Wipe # Reading Wipe # Reading _____ ccpm _____ ccpm _____ ccpm _____ ccpm _____ ccpm _____ ccpm _____ ccpm _____ ccpm _____ ccpm _____ ccpm	Comments: Surveyed By: _____ Reviewed By: _____
Inst Type: _____	_____		
Inst No: _____	_____		
Batt/Source Chk: _____	_____		
Cal. Due Date: _____	_____		
All Areas < <u>S</u> mR/hr@1foot (Unless otherwise indicated)			
LEGEND: Numbers appearing on map are mR/hr @ 1 ft readings unless denoted with symbols below. * = mR/hr @ contact A = Air Sample (#) = Wipe (F#) = Floor wipe			

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F- SECTOR MAP 6

PROTONS →



Beam Off Date:	Beam Off Time:	Intensity:	Highest Dose Rate Found: <u>45</u> mR/hr @ 1foot
Radiation Instruments Used		Bkgd _____ cpm Wipe # Reading Wipe # Reading _____ ccpm _____ ccpm _____ ccpm _____ ccpm _____ ccpm _____ ccpm _____ ccpm _____ ccpm _____ ccpm _____ ccpm	Comments: Surveyed By: _____ Reviewed By: _____
Inst Type: _____	_____		
Inst No: _____	_____		
Batt/Source Chk: _____	_____		
Cal. Due Date: _____	_____		
All Areas < <u>5</u> mR/hr@1foot (Unless otherwise indicated)			
LEGEND: Numbers appearing on map are mR/hr @ 1 ft readings unless denoted with symbols below. * = mR/hr @ contact A = Air Sample (#) = Wipe (F#) = Floor wipe			