

4/22/81

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	Docket Nos. 50-250-SP
)	50-251-SP
FLORIDA POWER & LIGHT COMPANY)	(Proposed Amendments to
)	Facility Operating License
(Turkey Point Nuclear Generating)	to Permit Steam Generator
Units 3 and 4))	Repairs)

AFFIDAVIT OF EDWARD F. BRANAGAN, JR. ON CONTENTION 8

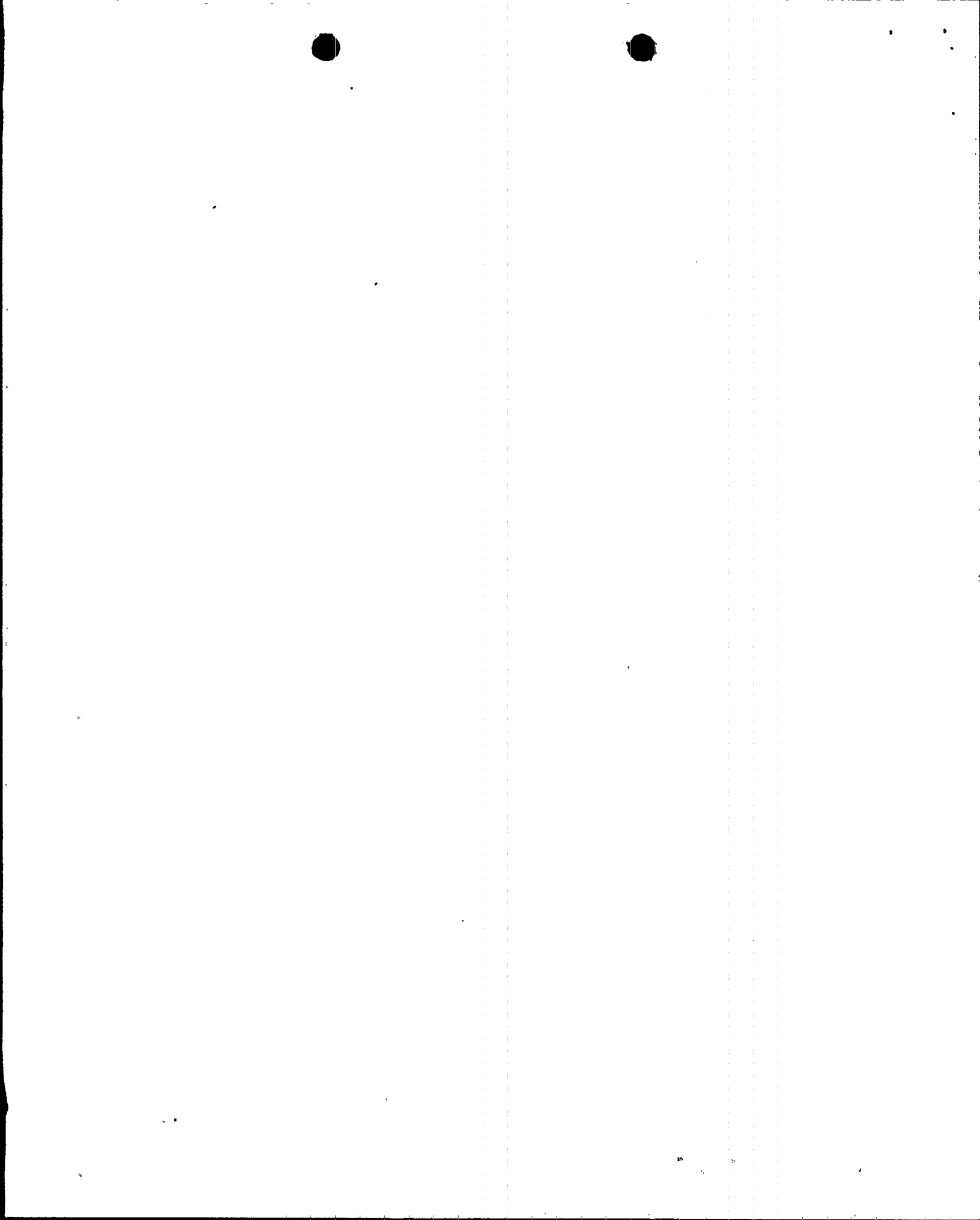
I, EDWARD F. BRANAGAN, JR., being duly sworn, state as follows:

1. Contention 8 states:

The proposed method of radiation monitoring during repair of the steam generators will not provide accurate information to comply with 10 CFR Parts 20 and 50.

2. I have reviewed statement 6 of the statement of material facts accompanying the applicant's April 8, 1981, motion for summary disposition of contention 8, and concur with this fact.

3. The radiological environmental monitoring program will continue to be in effect as it has been since the plant was licensed. The purpose of the environmental monitoring program is to confirm that measured releases of radioactivity (i.e., radiological effluent monitoring) from the plant do not result in unanticipated buildups in the environment. It will be conducted according to Technical Specification 4.12-1 for the Turkey Point Plant (copy attached) This program is conducted by the State of Florida under contract to the



Applicant. The program produces reports on a semi-annual basis according to Technical Specification 6.9.4. The program and the reports are regarded as acceptable to the Staff.

Edward F. Branagan, Jr.
Edward F. Branagan, Jr.

Subscribed and sworn to before me
this 22nd day of April, 1981.

William J. Jellison
Notary Public

My Commission expires: July 1, 1982

Attachment:
As Stated



4.12 ENVIRONMENTAL RADIATION SURVEY

Applicability: Applies to routine testing of plant environs.

Objective: To establish a sampling program which will assure cognizance of changes in radioactivity in the environs.

Specification: Radiological environmental samples shall be collected and analyzed in accordance with Table 4.12-1 at locations shown on Figure 4.12-1.



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TABLE 4.12-1 - SHIP

OPERATIONAL ENVIRONMENTAL RADIOLOGICAL SURVEILLANCE PROGRAM (1)

	<u>Criteria and Sampling Locations</u>	<u>Collection Frequency (2)</u>	<u>Analysis/Counting</u>
<u>AIR</u>			
1.1	Particulate and Iodine Comparison of on-site versus off-site & reference locations 3 locations on-site in prevailing wind directions from plant T58, T71, T72 4 locations off-site within a radius of 10 miles of plant in prevailing wind directions from the plant T51, T52, T56, T57 1 location for reference 22 miles north of plant site T64	Weekly	Gross Beta Gamma spectral analysis of monthly composite if indicated by high beta activity Radioactive Iodine
1.2	Direct Radiation Comparison of on-site versus off-site & reference locations Sampling locations same as 1.1, plus off-site on North Key Largo T70	Monthly	Determine direct radiation exposure by TLD readout
1.3	Precipitation (3) Comparison of on-site versus off-site & reference locations 1 location on-site T72 1 location for reference 22 miles north of plant site T64 2 locations off-site within a radius of 10 miles of plant in prevailing wind directions from the plant T52, T57	Monthly	Gross beta Gamma spectral analysis (4) Tritium (4)
<u>WATER</u>			
2.1	Surface Water		
2.1.1	Estuarine 5 locations - Biscayne Bay T51, T67, T69, T71, T93 5 locations - Card South T66, T81, T86, T94, T95	Quarterly	Gamma spectral analysis Tritium Sr-89 & 90 (if detected in 2.1.2)
2.1.2	Cooling Canal System 1 location - Lake Warren T84 1 location - Loch Rosetta T97	Monthly	Gamma spectral analysis Tritium Sr-89 & 90

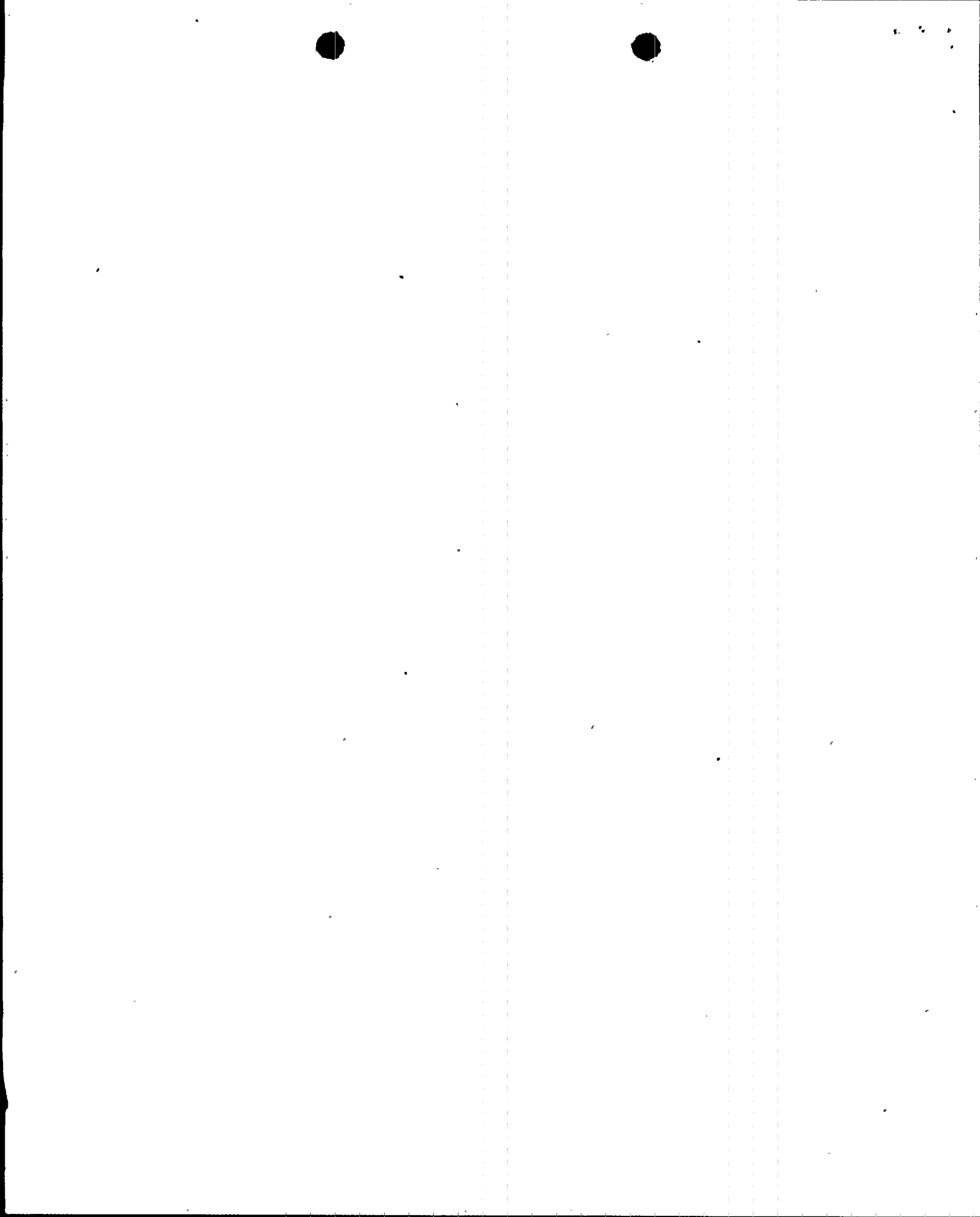


TABLE 4.12-1 - SHEET 2

OPERATIONAL ENVIRONMENTAL RADIOLOGICAL SURVEILLANCE PROGRAM (1)

	<u>Criteria and Sampling Locations</u>	<u>Collection Frequency (2)</u>	<u>Analysis/Counting</u>
2. <u>WATER (cont'd)</u>			
2.1.3 Fresh Water Drainage Canal	1 location - Florida City Canal West of Levee T75 1 location - Model Land Canal West of Levee T96	Monthly	Gross beta Tritium
2.2 Potable Well Water	Dolan Farm T57 City of Homestead, drinking water supply T73 Naranja Water Company, drinking water supply T74	Quarterly	Gross beta Tritium
2.3 Ground Water Wells	Locations west, south and east of cooling canal system T87, T88, T89, T90, T91, T92	Quarterly	Gamma spectral analysis Tritium Sr-89 & 90
3. <u>BOTTOM SEDIMENT</u>			
3.1 Cooling Canal System	2 locations T84, T85	Quarterly	Gamma spectral analysis Sr-89 & 90 (if detected in 2, 1, 2)
3.2 Estuarine	7 locations - T66, T69, T81, T86, T93, T94, T95	Semi-annually	Gamma spectral analysis Sr-89 & 90 (if detected in 2, 1, 2)
4. <u>AQUATIC BIOTA (1)</u>			
4.1 Crustacea			
Lobster, crab &/or shrimp	6 locations - T59, T66, T69, T81, T94, T95	Semi-annually	Gamma spectral analysis Sr-89 & 90
4.2 Fish (vertebrates)			
Carnivores: Barracuda or Mangrove Snapper	6 locations - T59, T66, T69, T81, T94, T95	Semi-annually	Gamma spectral analysis Sr-89 & 90

(3.1)

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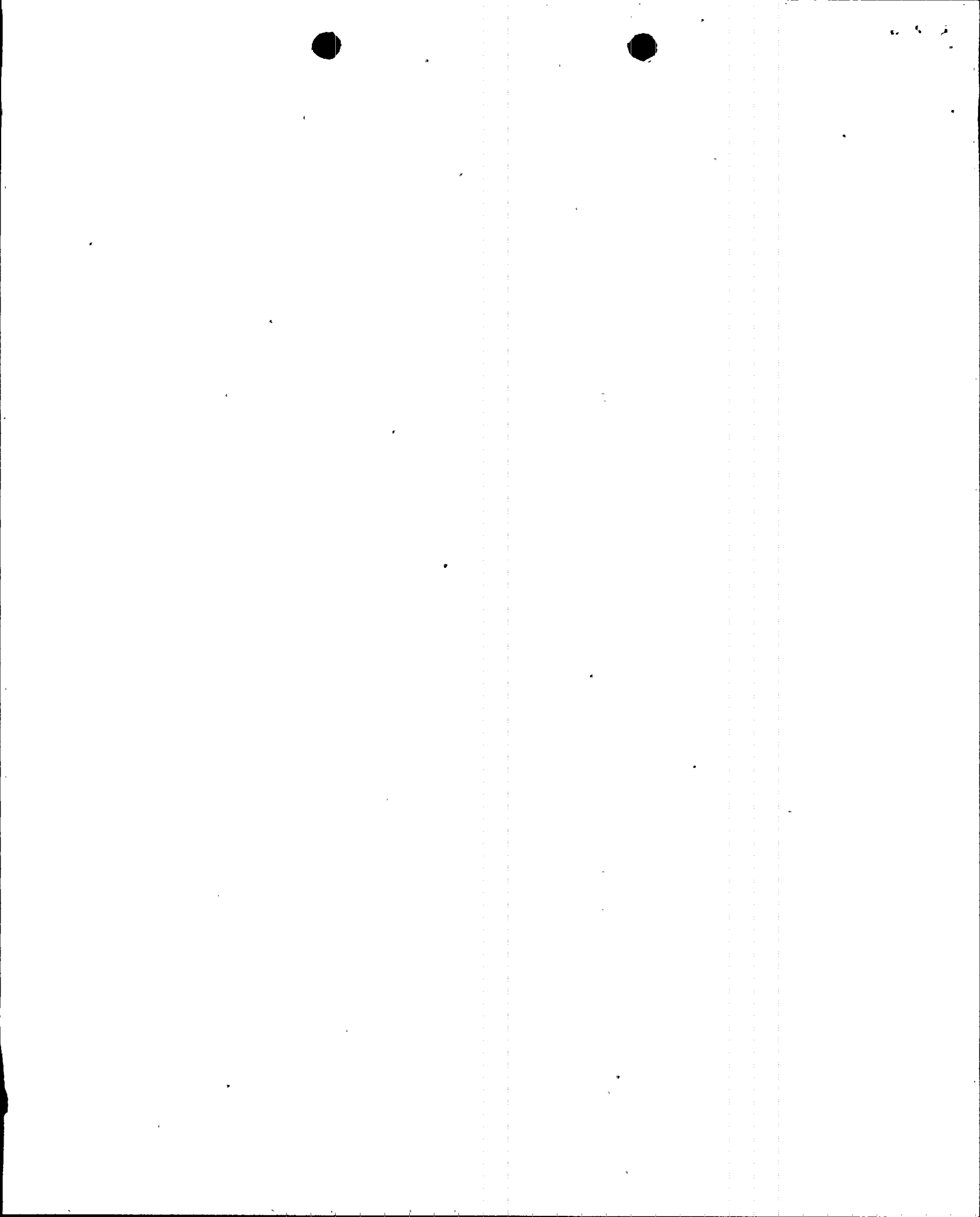


TABLE 4.12-1 - SHEET 3

OPERATIONAL ENVIRONMENTAL RADIOLOGICAL SURVEILLANCE PROGRAM (1)

	<u>Criteria and Sampling Locations</u>	<u>Collection Frequency (2)</u>	<u>Analysis/Counting</u>
4. <u>AQUATIC BIOTA (1) (Cont'd)</u>			
4.2 (Cont'd)			
Herbivores: Mullet (<i>mugil cephalus</i>)	6 locations - T59, T66, T69, T81, T94, T95	Semi-annually	Gamma spectral analysis Sr-89 & 90
4.3 Other			
Manatee Grass &/or Turtle Grass	6 locations - T59, T66, T69, T81, T94, T95	Semi-annually	Gamma spectral analysis Sr-89 & 90
Sponges (<i>porifera</i>)	6 locations - T59, T69, T86, T93, T94, T95	Semi-annually	Gamma spectral analysis
5. <u>TERRESTRIAL</u>			
5.1 Milk (future) (1)	No dairy herds currently in area of influence (5)		
5.2 Biota (1)			
1. Small Animal	1 location adjacent to plant site	Semi-annually	Gamma spectral analysis Sr-89 & 90
2. Food Crops	3 locations within a 10 mile radius of plant in prevailing wind directions from plant T52, T55, T57	Harvest time	Gamma spectral analysis Sr-89 & 90
3. Other Vegetation (Mangrove leaves)	7 locations within a 10 mile radius of plant generally where there are air particulate samplers T51, T58, T59, T64, T71, T72, T86	Semi-annually	Gamma spectral analysis Sr-89 & 90
5.3 Soil	7 locations within a 10 mile radius of plant generally at air particulate sampler locations T52, T54, T55, T56, T57, T58, T64	Semi-annually	Gamma spectral analysis Sr-89 & 90

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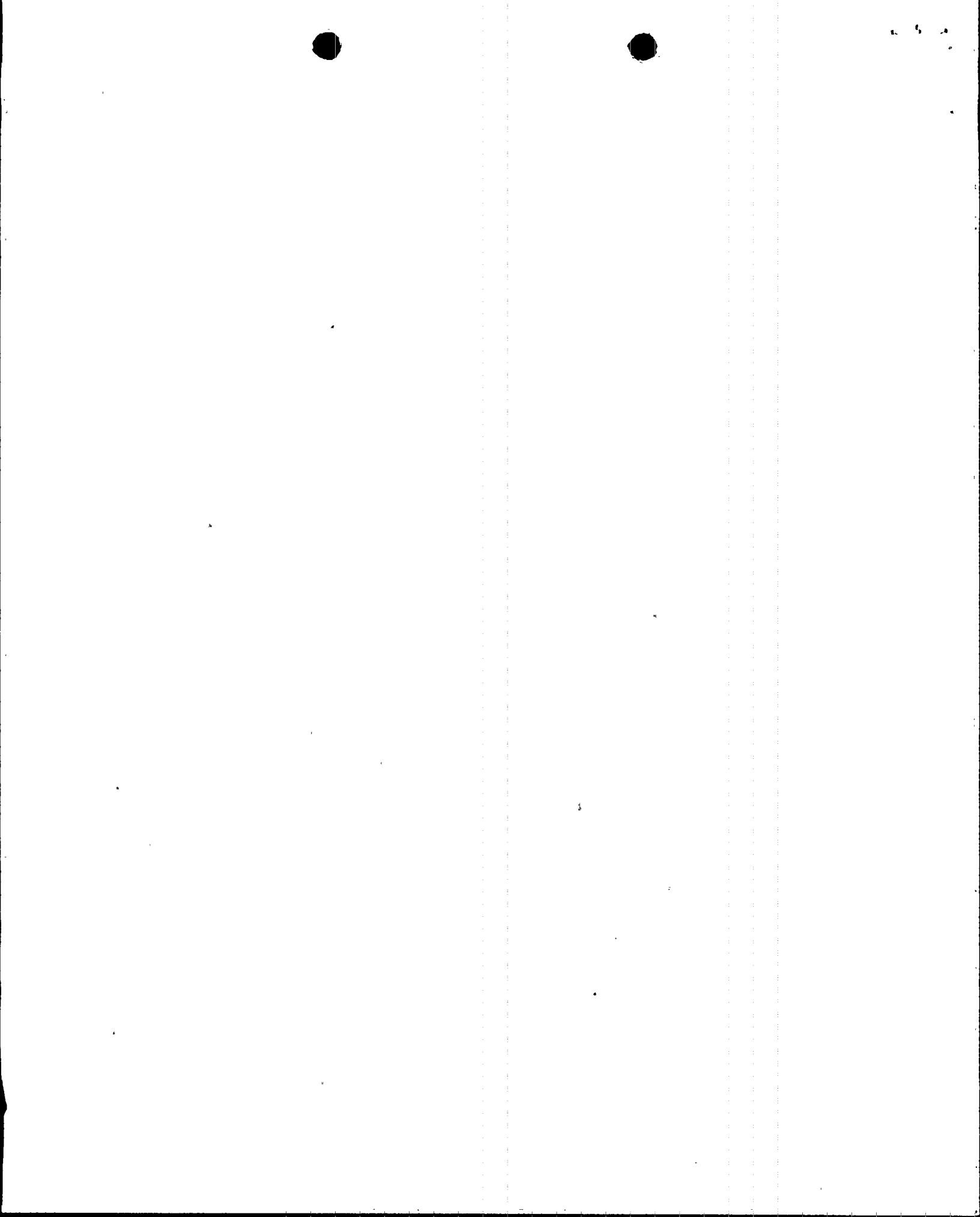


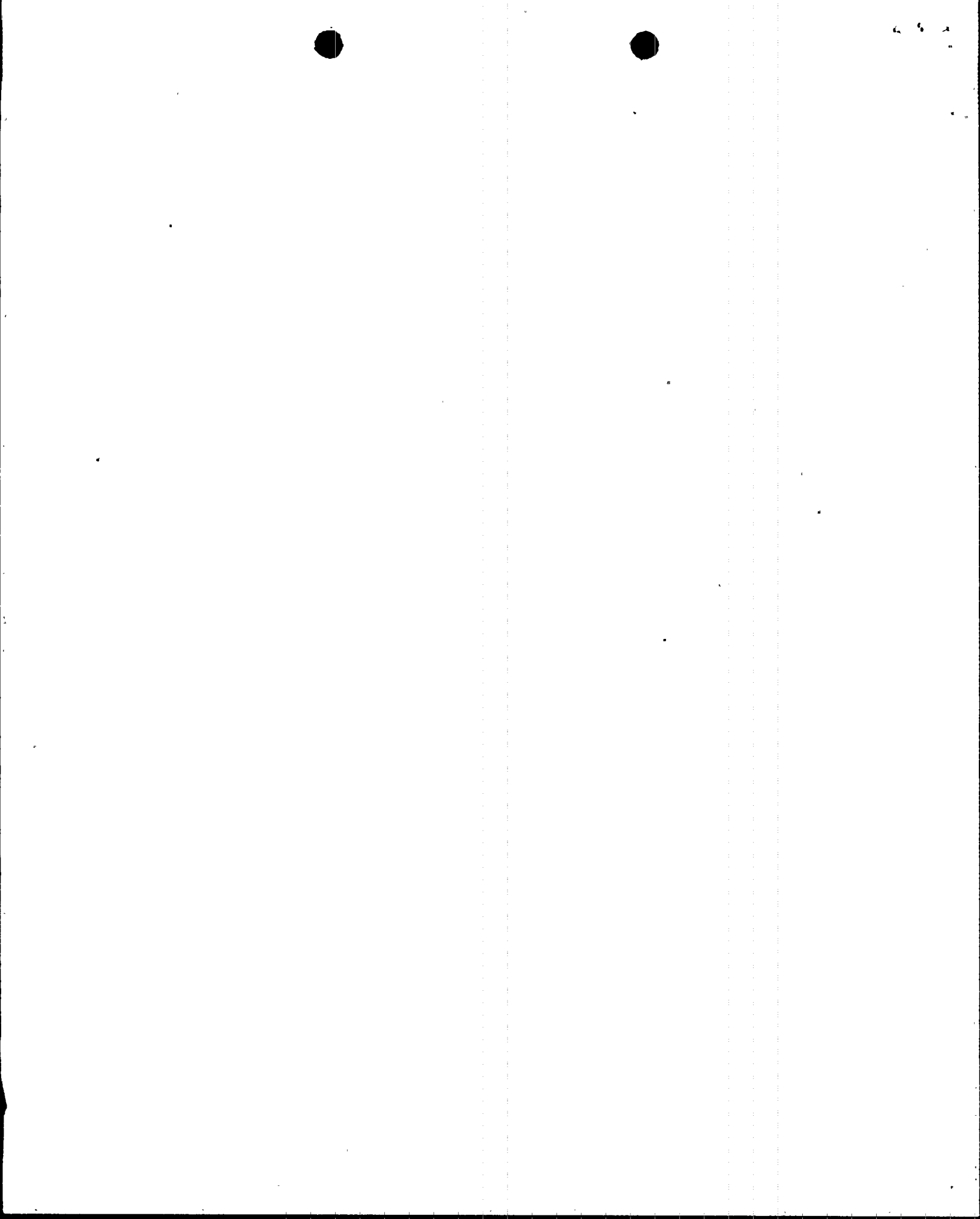
TABLE 4.12-1 - SHEET 4

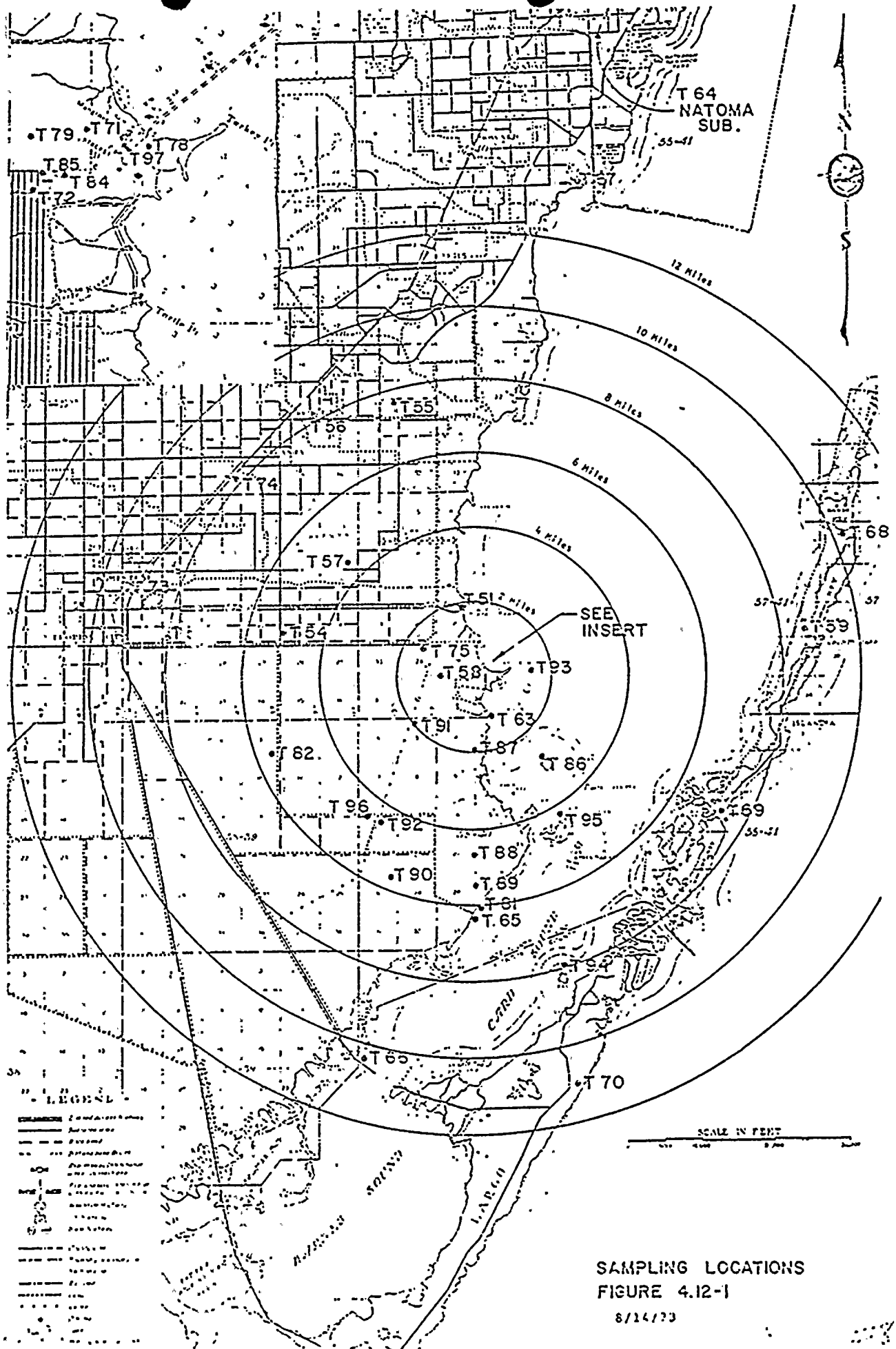
OPERATIONAL ENVIRONMENTAL RADIOLOGICAL SURVEILLANCE PROGRAM (1)

- (1) Samples will be taken whenever biologically available.
- (2) Frequency definitions follow:

Weekly -	Not less than 48 times per annum - interval may vary by 3 days.
Monthly -	Not less than 10 times per annum - interval may vary by 15 days.
Quarterly -	Not less than 4 times per annum - interval may vary by 30 days.
Semi-annually -	Not less than 2 times per annum - interval may vary by 60 days.
- (3) Analysis will be performed provided sufficient wet deposition occurs.
- (4) Gamma spectral and tritium analysis will be performed provided sufficient size liquid sample is collected.
- (5) A semi-annual survey will be conducted and any change reported to the AEC.
If milk producing herds are detected, a sampling program will be initiated.

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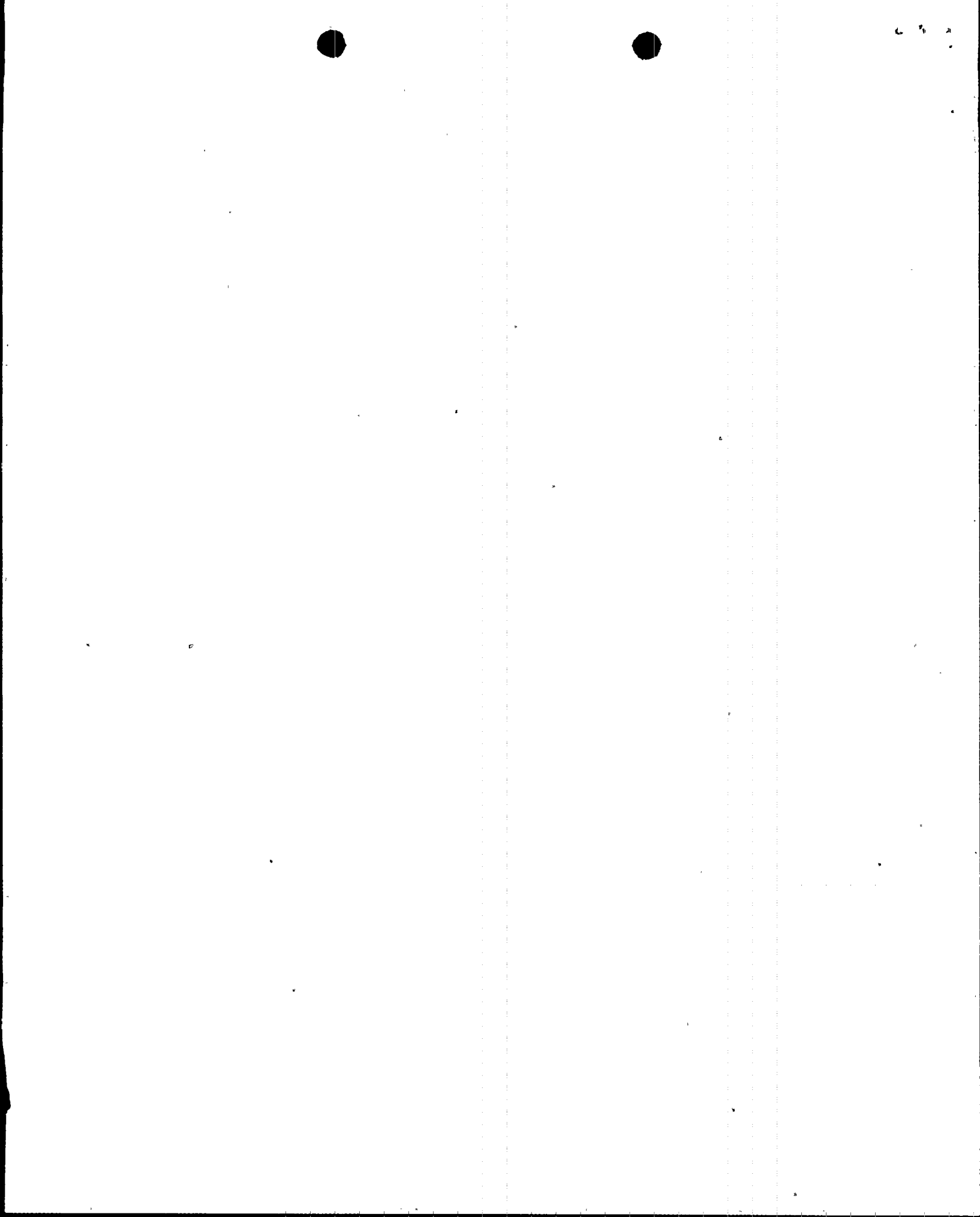


TABLE 4.12-2

OPERATIONAL ENVIRONMENTAL RADIOLOGICAL SURVEILLANCE PROGRAM
TYPES OF ANALYSIS1. Gamma Spectroscopy

Ce-144	Ba-140
I-131	K-40
Ru-106	Ra-226
Cs-134	Th-232
Cs-137	Co-58
Zr-95	Co-60
Mn-54	Cr-51
Zn-65	

2. Beta Liquid Scintillation Spectroscopy

H-3
C-14
P-32

3. Chemical Separation and Analysis

Sr-89
Sr-90

