Quarterly Environmental Radiological Survey Summary

Third Quarter 1997

100, 200, 300, and 600 Areas

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Date Published

October 1997

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Project Hanford Management Contractor for the
U.S. Department of Energy under Contract DE-AC06-96RL13200

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National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
(703) 487-4650

Printed in the United States of America

DISCLM-1.CHP (1-91)

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EXECUTIVE SUMMARY

This report provides a summary of the radiological surveys performed in support of near-facility environmental monitoring at the Hanford Site. The Third Quarter 1997 survey results and the status of actions required are summarized below:

- All of the routine environmental radiological surveys scheduled during July, August, and September, were performed as planned with the exception of REDOX rail road cut. This site was not surveyed due to physical constraints. The sites switched during the second quarter for the Environmental Restorations Contractor (ERC) team were completed during the third quarter.
- One hundred thirty three environmental radiological surveys were performed during the third quarter 1997, 33 at the active waste sites and 100 at the inactive waste sites. Contamination above background levels was found at four of the active waste sites and five of the inactive waste sites. Contamination levels as high 600,000 disintegrations per minute (dpm) were reported. Of these contaminated surveys five were in Underground Radioactive Material (URM) areas and four were in contamination areas. The contamination found within three of the URM areas was immediately cleaned up and no further action was required. The remaining two URM sites were posted and will require decontamination. Radiological Problem Reports (RPR's) were issued and the sites were turned over to the landlord for further action as required.
- During the third quarter of 1997, 2.0 hectares (5.0 acres) were stabilized and radiologically down posted from Contamination Area (CA)/Soil Contamination (SC) to URM.
- Five open Surveillance Compliance Inspection Reports (SCIRs) had not been resolved.

Responsibilities for the unresolved SCIRs are as follows:

LANDLORDOPEN SCIR/CAR

Tank Farm Operations (TFO)	4
Solid Waste Operations (SWO)	1

TOP TEN PRIORITY RANKING

Below is a listing of the top ten waste sites in order of highest priority ranking for contamination control. The waste site may have an open SCIR or CAR identifying the contamination. An explanation of the prioritization system is on page 13 of this report.

<u>SITE</u>	<u>CUSTODIAN</u>	<u>SCIR/CAR</u>
1. 241-C Tank Farm Perimeters	TFO	9008EP200-068
2. 241-B Tank Farm Perimeters	TFO	8909EP200-036
3. 241-BX-BY Tank Farm Perimeters	TFO	9007EP200-056
4. 241-S, SX, SY Tank Farm Perimeters	TFO	9208ERI-006
5. UN-216-E-6 241-BX-155 Diversion Box	TFO	NONE
6. 207-U Retention Basin	ERC	NONE
7. 216-B-64 Basin	B-Plant	NONE
8. 207-A Retention Basin	TFO	NONE
9. 207-B Retention Basin	B-Plant	NONE
10. 241-A Tank Farm	TFO	NONE

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1.0 INTRODUCTION

Routine radiological surveys are part of near-facility environmental monitoring which monitors and helps direct the reduction of the radiological areas at the Hanford Site. The routine radiological surveys are performed by the Southern Area Remediation Support Group and the Site Support Services Radiological Control Group as directed by Environmental Monitoring and Investigations. The surveys included in this program consist of inactive waste sites; outdoor radiological control areas; tank farm perimeters and associated diversion boxes, lift stations, and vent stations; perimeters of active or uncovered waste sites such as burial grounds, retention basins, ponds, process trenches, and ditches; underground pipelines; and road and rail surfaces (Figures 1 through 10). This report provides a summary of the radiological surveys performed during the Third Quarter of 1997. The status of corrective actions required from current and past reports are also discussed.

A waste site survey schedule, WHC-SP-0098-8, was developed by Environmental Monitoring and Investigations and reviewed by the Southern Area Remediation Support Group and the Site Support Services Radiological Control Group. Environmental Monitoring and Investigations reviews the radiological survey reports and files a copy for historical purposes and reference. Radiological conditions are tracked and trends noted. All sites are surveyed at least once each year. The survey frequencies for particular sites are based on site history, radiological conditions, and general maintenance. Special surveys may be conducted at irregular frequencies if conditions warrant (e.g., growth of deep-rooted vegetation is noted at a waste site). Radiological surveys are conducted to detect surface contamination and document changes in vegetation growth, biological intrusion, erosion, and general site maintenance conditions. Survey data are compared with standards identified in WHC-CM-7-5, Environmental Compliance, as well as previous surveys to recognize possible trends, assess environmental impacts, and help determine where corrective actions are needed.

Landlords of the sites found out of compliance may be issued a Radiological Problem Report (RPR) from the appropriate radiological Control Group. Open Surveillance Compliance Inspection Reports (SCIRs) and Compliance Assessment Reports (CARs) are listed in Table 1 of this report.

The surveys scheduled for this program consist of inactive waste sites; outdoor radiological areas; tank farm perimeters and associated diversion boxes, lift stations, and vent stations; perimeters of active or uncovered waste sites such as burial grounds, retention basins, ponds, process trenches, and ditches; underground pipelines; and road and rail surfaces. Surveillance of the active nuclear facilities and inside the tank farms is the responsibility of the facility. These radiological surveys are to determine surface radiological conditions and do not constitute a release survey. Therefore, surveys that detect no contamination in radiological areas do not release the site from control but may result in a posting status change.

Figure 1

WNNWEM10-97HCZ7-97

Figure 6

Figure 8

Table 1. Open SCRs AND CARs
(maximum 15 points)

SCR/CAR	SITE	DATE INITIATED	MONTHS OPEN	ECD	SITE RANKING	CUSTODIAN
8909EP20-005	241-B FARM PERIMETERS	09/01/89	99	09/30/97	13	TFO
9007EP20-006	EX-EY TANK FARM PERIMETERS	07/20/90	88	09/30/97	13	TFO
9008EP20-008	CTANK FARM PERIMETERS	08/13/90	87	09/30/97	13	TFO
9208EP-006	241-S, SX, SY TANK FARM PERIMETERS	08/14/92	63	09/30/97	12	TFO
9007NF14-003	218-E-10, 218-E-12B, 218-W-3A, AND 218-W-4C BUREAL GROUNDS	07/18/96	8	04/01/96	N/A	SWO

2.0 PROGRAM DESCRIPTION

2.1 ENVIRONMENTAL RADIOLOGICAL SURVEY OBJECTIVES

Environmental radiological surveys are performed to:

- Identify priorities for environmental cleanup or stabilization of surface contamination.
- Determine compliance with Department of Energy requirements and applicable policies and standards regarding operational control and environmental and radiological protection.
- Identify trends in radioactive contamination levels and contamination migration at waste sites and other radiological areas.
- Assess the surface integrity of solid and liquid waste disposal sites.
- Monitor for unplanned releases of radioactivity to the operations area environment.

2.2 PRIORITY RANKING SYSTEM

A numerical ranking system is used for sorting contaminated waste sites relative to environmental radiological concerns. This system provides a priority guideline to responsible landlords for clean-up or stabilization of contaminated/soil-contaminated areas.

A numerical value is assigned based on the level of contamination, site accessibility, and contamination mobility. Site histories are examined by reviewing past and present radiological surveys. Contamination levels from 1,000 counts per minute (cpm) to greater than 10 mrad/hr (as measured on Radiological Control's field survey instruments) are considered and assigned a numerical value of 1 (lowest value) to 5 (greatest value). Any removable alpha contamination will be considered a high priority and will receive a contamination value of 5. Location is evaluated for accessibility. A restricted area would receive the lowest point value of 1 progressing up to a value of 5 where the public could have access. Mobility refers to contamination that can be or has a history of being transported from where it was originally identified to places outside of the posted radiological area. Fixed contamination would receive a value of 1 progressing to contamination that is blown by the wind or the result of biological uptake receiving a value of 5. There is a maximum of 15 points possible for this ranking system.

It should be noted that this system is not intended to be a total risk assessment, but rather a way of communicating environmental significance to the landlords and their program offices. Other elements of the site clean-up process are considered such as costs, location, public/regulatory interest and engineering strategies before a site is actually remediated.

2.3 ENVIRONMENTAL STANDARDS

Radiological survey data are used to determine compliance of Radioactive Waste Sites with WHC-CM-7-5, Environmental Compliance, Section 6.0 (Rev. 3) and BHI-EE-02, Environmental Requirements, Section 7.0 (Rev. 0); requirements.

Applicable requirements include the following:

1. Engineered barriers shall be provided, where applicable, over the disposal site to inhibit radionuclide transport to the surface.
2. Inactive waste site boundaries shall be accurately and permanently marked with Hanford plant standard (AC-5-40) approved concrete marker posts. Sites never used and those that are no longer contaminated do not require marker posts.
3. Facility effluent lines which are potential discharge points shall be isolated, capped, or sealed off to prevent accidental releases to inactive sites. This shall be verified and documented.
4. Active and inactive waste sites shall be inspected and surveyed at least annually.
5. One or more of the following actions shall be taken when contamination of any type is detected (either new or in excess of action limits) to prevent the migration or mobilization of the contamination:
 - * Small-scale stabilization (<5 acres)
 - * Vegetation removal
 - * Radioactive hot-spot removal
 - * Fencing
 - * Posting
 - * Herbicide spraying
 - * Immediate spill response
 - * Other corrective measures
6. Information regarding all suspect waste sites or newly identified waste sites shall be provided for documentation into the Environmental Sites Database/Waste Identification Data System (ESD/WIDS).
7. Inactive waste sites shall be maintained to control deep-rooted vegetation that could provide transport of contamination to the surface through plant uptake. The application of herbicides or pesticides may be required.

Environmental Monitoring and Investigations is responsible for:

1. Establishing radiological survey schedules of active and inactive radiological waste sites.
2. Conducting inspections of active and inactive waste sites to determine compliance with the physical and radiological requirements.
3. Compiling and maintaining copies of historical records, including radiological survey reports, compliance assessment reports (CARs), surveillance/compliance inspection reports (SCIRs), and other information for each active and inactive radioactive waste site.
4. Trending radiological data, and issuing reports on the status of radiological surveys and compliance assessments for active and inactive radioactive waste sites.
5. Reviewing any proposed activity, other than routine inspections, that may impact or may be impacted by any active and inactive waste site.

The above mentioned requirements apply to all active and inactive radioactive waste sites which include cribs, trenches, ditches, ponds, French drains, underground pipelines, burial grounds and other areas of concern such as the perimeters of tank farms and active burial grounds, and radioactive contamination due to spills or releases. Interiors of tank farms, active burial trenches and radiological areas where operations are ongoing are not included, because monitoring and tracking is done by the facility operations and other requirements are applicable to these areas.

In order to compare standards [as established in WHC-CM-7-5, Section 6.0] and field instrument values, a conversion factor is necessary. This conversion factor has been established where 20,000 dpm (2,000 cpm) are approximately equivalent to one millirem per hour for beta-emitting radionuclides. It must be understood that converting field instrument values, which include both beta and gamma energies, is approximate and does not allow for absolute precision.

2.4 SURVEY METHODS AND PROCEDURES

Surveys documented by this report include road/railroad surfaces, cribs, underground pipelines, stabilized burial grounds, covered ponds and ditches, tank farm perimeters, active burial ground perimeters, unplanned release sites and other radiological areas. Methods and procedures for these surveys can be found in WHC-CM-7-4, Operational Environmental Monitoring; HSRM-1, Hanford Site Radiological Control Manual; and WHC-IP-0718, Health Physics Technical Practices and Procedures.

2.4.1 ROAD/RAILROAD SURVEYS

Road and Railroad Surveys are conducted with a vehicle equipped with "high railers", which allows the vehicle to travel both on the roads or railroads, and sodium iodide detectors. The detector height is adjustable and the average survey height is six inches.

The vehicle is driven at less than five miles per hour. If activity above background is detected, the vehicle is stopped and a thorough survey is made with a portable count rate meter equipped with a pancake type probe to identify the extent of the contamination. Appropriate management is notified if road/railroad contamination is identified, and corrective actions are initiated.

2.4.2 WASTE SITES AND OTHER RADIOLOGICAL AREA SURVEYS

Surveys at waste sites and other radiological areas may be conducted with vehicles equipped with radiation detection instruments or with portable field instruments. Field instrument survey results are reported in disintegrations per minute (using a correction factor of 10 dpm/cpm) as detected by using a Geiger-Mueller detector for beta/gamma radiation equipped with a pancake type probe. Alpha survey results are reported in disintegrations per minute (using a correction factor of 7 dpm/cpm) as measured with a portable alpha meter (PAM). Surveys include the perimeter and portions of the ground surface of radiological areas. Wherever possible, smear surveys are made on the surface of exposed equipment and other hard surfaces within a radiological area. Vegetation, animal burrows, and animal feces are also monitored to detect biological transport. Detailed survey practices and procedures are described in WHC-CM-7-4, Operational Environmental Monitoring; HSRM-1, Hanford Site Radiological Control Manual; and WHC-IP-0718, Health Physics Technical Practices and Procedures.

3.0 RADIOLOGICAL SURVEY RESULTS

All the routine environmental radiological surveys scheduled during the third quarter of 1997, were completed with the exception of REDOX rail road cut. This site was not surveyed as the rail road cut was completely blocked with blown in vegetation. The ERC team requested that the second quarter routines be switched with the third quarter routines as there was a conflict with the vegetation management activities. These surveys were conducted as revised.

Surveys of active and inactive waste disposal sites included cribs, trenches, burial grounds, covered ponds and covered ditches. The survey schedule for environmental sites is outlined in WHC-CM-7-4, Section 12, and in WHC-SP-0098-8, Rev. 0. Radiological surveys of the construction/remediation activities are performed by Environmental Restoration Contractor and are not included in this report.

One hundred thirty three environmental radiological surveys were performed during the third quarter of 1997. Contamination above background levels was found at four of the surveyed active waste site areas and five of the inactive waste site areas. Contamination levels ranging from a low of 1,600 dpm to a high of 600,000 dpm were reported. Of the contamination found, five sites were located in URM areas and four sites were located in a CA/SCA areas.

The contamination found in three of the URM areas was immediately cleaned up and no further action was required. The contamination found in the remaining two URM areas were posted and will require decontamination. Radiological Problem Reports were issued and the remaining sites were turned over to the landlord for further action.

The radiologically contaminated areas have been reposted to meet the new requirements as outlined in the Hanford Site Radiological Control Manual, HSRCM-1. The posting includes Contamination, High Contamination (activity $>100,000$ dpm/100 cm^2 β/γ and/or $>10,000$ dpm/100 cm^2 α), Soil Contamination, Underground Radioactive Material, Radiological Buffer, and Radiation/High Radiation Areas. For continuity between quarterly reports issued in 1996, the use of Surface Contamination (SC) areas in this report includes Contamination, High Contamination, and Soil Contamination areas.

3.1 RADIOLOGICAL SURVEY SUMMARY

This report provides a synopsis of the radiological survey results conducted during third quarter of calendar year 1997. The stabilization efforts and release surveys for one waste site resulted in the down posting from CA/SC to URM of 2.0 hectares (5.0 acres).

During the second quarter, stabilization efforts and a release survey for the 216-A-25 Gable Mountain Pond extension, discovered during 1996 with the Bechtel Nevada ariel radiological survey, was completed and the site was radiologically down posted from CA/SC to URM.

While conducting radiological surveys, contaminated media was encountered and collected for analysis and/or disposal. Media found above actions levels defined in WHC-IP-0718, Health Physics Technical Practices and Procedures, are documented with a Radiological Problem Report and/or an

Occurrence Report. The samples that are deemed appropriate are sent in for analysis (Table 2). The results of these analysis can be found in the Hanford Site Near-Facility Environmental Monitoring Annual Report which is published in August of each year.

Abbreviations used in Table 2 are as follows:

- NS - Not submitted for analysis.
- NR - No activity recorded in the field.
- <D - Less than detectable with field instruments.

Table 2. 1997 Contamination Samples

SAMPLE NUMBER	DATE	DESCRIPTION	LOCATION	DOCUMENT	ACTIVITY (gpm) B/G
6717	11/05/96	Durking Beekle	272-S	cc: Mall R. Bungeamer 8/13/97	30,000
NS	01/07/97	Soil and Vegetation	Near corner of Baltimore and 12th Street	SS-97-001	2,500
NS	01/08/97	Soil	Southeast of 209-E	SS-97-001	8,000
NS	01/09/97	Rabbit Bunch	W-058 Pipeline between B-Plant and 241-C Tank Farm	cc: mail dated 4/15/97	25,000
NS	01/09/97	Soil	W-058 Pipeline between B-Plant and 241-C Tank Farm	cc: mail dated 4/15/97	100,000
NS	01/10/97	Specs	North of the Baltimore and 7th street intersection	cc: mail dated 1/10/97	800,000
6708	01/14/97	Rabbit feces	W-058 trench east of east 241-SY perimeter fence	SS-97-002	300,000
NS	01/21/97	Turnbulo-wood fragments	Trench 36 218-W-3A	SOLIDW/ASTB-97-0001	60,000
NS	01/27/97	Moose feces	212B Building (old change room)	BPL/NT-97-0001	400,000
NS	02/04/97	Feces of Tapo	On 241-BV Fence line	TANKEFARM-97-0014	140,000
6709	02/11/97	Coyote feces	216-T-42 Ditch and Pond	SS243842	1,000
NS	02/12/97	Specs	South of the 241-TX-155 Diversion Box	TANKEFARM-97-0019	170,000
NS	02/13/97	Ant Hill	East side of 241-TX-155 Diversion Box	cc: mail dated 2/14/97	48,000
6707	02/13/97	Turnbulo-wood fragments	East side of 241-TX-155 Diversion Box	cc: mail dated 2/14/97	120,000
NS	02/13/97	Specs	Southwest side of 241-TX-155 Diversion Box	cc: mail dated 2/14/97	300,000
NS	02/21/97	Turnbulo-wood	Perimeter of 241-AX	TANKEFARM-97-0020	> 1,000,000
NS	02/24/97	Two Turnbulo-woods	Between TR-283-EW/TR-445-EW (X-Site Transfer Line)	cc: mail dated 2/25/97	24,000
NS	03/04/97	Soil	Between TR-15-EW/TR-16-EW (X-Site Transfer Line)	TANKEFARM-97-0026	150,000
NS	03/05/97	Specs	UN-216-E-7	TANKEFARM-97-0027	700,000
NS	03/05/97	Soil spec	West side of the 3734 concrete pad	FSS-97-0002	7,500
NS	03/11/97	Specs	216-A-22 covered trench	DND-97-0006	38mm/hr
NS	03/17/97	Risers	West and East risers at UN-216-E-13	SS244143	83,000
NS	03/19/97	Specs	Specs found in Backfill soil for 216-S-18 C&B	DND-97-0008	75,000
NS	03/19/97	Specs	BC Control Area Road	DND-97-0010	50,000
NS	03/24/97	Soil	UN-216-E-7	TANKEFARM-97-0030	200,000

Table 2. 1997 Contamination Samples

SAMPLE NUMBER	DATE	DESCRIPTION	LOCATION	DOCUMENT	ACTIVITY (gpm) BG
NS	04/03/97	Tumbleweed	216-B-1 & 2 Ditch	BHLDND-97-0012	350,000
NS	04/03/97	Pipe show	216-A-8 Crib	RPNs Dred 4/02/97	5,000
NS	04/03/97	Tumbleweed	216-B-1 & 2 Ditch	BH-GENABAS-97-0001	350,000
6706	04/03/97	Bird Nest	244-TX	ccMail R. Bungeamer 8/13/97	9,000
NS	04/14/97	Spock	241-AZ	TANKEARM-97-0008	150,000
6716	04/18/97	Great Basin Pocket Mouse	1518-N	ccMail R. Bungeamer 8/13/97	3,000
NS	04/22/97	Tumbleweed Fragments	SW Perimeter of 241-C Tank Farm	TANKEARM-97-0039	100,000
NS	04/28/97	Schwarze Wail Pump	Well 298-W/19-37	BH-GROUTDWR-97-0002	15,000
NS	04/28/97	Alpha Chlorine and Soil	218-W-4B	SOLIDWASTE-97-0003	21,000
NS	04/29/97	Tumbleweed Fragments	East of 241-A Tank Farm	TANKEARM-97-0041	300,000
NS	04/30/97	Soil/Tumbleweed Fragments	At Trench #42 218-E-12B	SOLIDWASTE-97-0004	150,000
NS	05/01/97	Spock	218-W-4B	SOLIDWASTE-97-0005	400,000
NS	05/01/97	Soil	South of 221-B Under Cover Box	BPLANT-97-0008	90,000
NS	05/12/97	Soil Spock/Grass Blade	241-B Tank Farm	RPNs Dred 5/12/97	1,000,000
6711	05/12/97	Great Basin Pocket Mouse	241-C Tank Farm	ccMail R. Bungeamer 8/13/97	10,000
6715	05/12/97	12 Sage Lizards	South Side of FUREX	ADJ Weedy	2,000
6701	05/12/97	Deer Mouse (Immature)	244-A Lift Station	ADJ Weedy	600
NS	05/14/97	Tumbleweed Fragments & Soil	Outside West Perimeter Fence Line @ 241-S & 241-SX	TANKEARM-97-0045	100,000
NS	05/15/97	Spock	241-B Tank Farm	RPN Dred 5/15/97	> 40,000
NS	05/15/97	Tumbleweed	Northeast corner of 200-West Enclosure	FSS-97-0009/SB-97-005	60,000
NS	05/15/97	Contaminated Rail Car	Release survey for excess salts	FSS-97-0010	40,000
NS	05/20/97	Spocks	241-U-151 & 241-U-152 Diversion Boxes	TANKEARM-97-0046	250,000
NS	05/21/97	Tumbleweed Fragments	NE Corner of 200-E Perimeter Fence Line	FSS-97-0011/RPN-97-013	30,000
NS	05/23/97	Vegetation/Soil	East perimeter fence at 241-SY Tank Farm	RPN Dred 5/20/97	300,000
NS	06/03/97	Animal Feces (Rabbit & Mice)	Along Stream line South of 7th Street	TANKEARM-97-0050	250,000
6703	06/03/97	3-House Mice	244-AR Vault	ccMail R. Bungeamer 8/13/97	25 mice/hr
NS	06/04/97	Soil	200-W Railroad Tracks west of 2713-WB Green Hut	SS-97-004/RPN Dred 6/4/97	250,000

Table 2. 1997 Contamination Samples

SAMPLE NUMBER	DATE	DESCRIPTION	LOCATION	DOCUMENT	ACTIVITY (dpm) B/G
NS	06/05/97	10 Areas of Soil Spocks	200-W Railroad Tracks North of soil found on 6/4/97	FSS-97-0012	30,000
6699	06/05/97	Tumbleweed Fragments	200-E perimeter fence outside Gate #10	FSS-97-0013	180,000
6714	06/05/97	Moose Nest	South of B-Plant Correx	cc:Mail R.Bungamer 8/13/97	10,000
NS	06/09/97	Spock	2706-T yard	TPLANT-97-0010	55,000
NS	06/09/97	Dust Particle	Railroad Tracks north of 283-W	RPN Dated 6/9/97	400,000
NS	06/11/97	Spocks	154-UX Diversion Box	TANKFARM-97-0053	450,000
6700	06/11/97	Mouse Poos	R.R. Tracks East of 218-W-4B Burial Ground	RPN Dated 6/11/97	50,000
6702	06/16/97	Great Basin Pocket Mouse	244-A Lift Station	cc:Mail R.Bungamer 8/13/97	20,000
6703	06/16/97	Cotton Tail Rabbit	244-A Lift Station	cc:Mail R.Bungamer 8/13/97	< D
NS	06/18/97	Dust Particle	216-S-25	RPN Dated 6/18/97	150,000
6713	06/19/97	Deer Mouse	241-S Tank Farm West Perimeter	RSR SS-245029	8,000
6704	06/24/97	Deer Mouse (Immature)	244-A Lift Station	cc:Mail R.Bungamer 8/13/97	8,000
NS	06/26/97	Tumbleweed Fragments	UN-216-E-20/21	FSS-97-0015	350,000
NS	06/30/97	Tumbleweed Fragments	Inside 200-E at LERF Loop Road	FSS-97-0016	400,000
NS	07/01/97	Tumbleweed	Outside the east fence line of 241-AX/AZ	TANKFARM-97-0057	600,000
NS	07/17/97	Flatbed Rail Car HO-10A-3407	Contamination found during excess sale survey	FSS-97-0017	11,000
NS	07/14/97	Ant mound	25 foot NW of 216-Z-9B Building	CC:mail dated 7/14/97 DPE	40,000
NS	07/17/97	Mouse	100-K Basins	Telecon from Tony Dazo	4,000
NS	07/21/97	Tumbleweed Fragments	Along 23rd Street in 200-W	CC:Mail dated 7/21/96 DPE	50,000
6712	07/22/97	2-Deer Mice	MO-031 east of FFP	RSR SS-245267	10,000
NS	07/23/97	Flatbed Trailer HO-64-15325	Contamination found during excess sale survey	FSS-97-0018	310,000
6710	07/28/97	Great Basin Pocket Mice	6290-E Rigger's Loft	RSR SS-245288	4,000
NS	07/28/97	Tumbleweed	East of 241-AZ	TANKFARM-97-0059	50,000
NS	07/28/97	Spock	South of the middle change trailer 241-C Tank Farm	TANKFARM-97-0060	50,000
NS	07/28/97	Dried vegetation	In trench #42 in 218-E-12B Burial Ground	SOLIDWASTE-97-0010	100,000
NS	07/25/97	Asphalt/roadway	Roadway at corner of Alaska/Gimko 300 Area	FSS-97-0019	90,000
NS	07/29/97	Vegetation	1301-N Vegetation Samples #6686 & 6677	RSR SS-245291	35,000

Table 2. 1997 Contamination Samples

SAMPLE NUMBER	DATE	DESCRIPTION	LOCATION	DOCUMENT	ACTIVITY (dpm) B/G
NS	06/01/97	Soil	At the base of 296-B-10 Stack	WESP-97-0006	75,000
NS	06/12/97	Pebble (gravel)	Shoulder of road @ Alaska and Ginko Streets	FSS-97-0021	20,000
NS	06/13/97	Flatbed Trailer	1100 Area prior to offsite shipment	FSS-97-0022	1,600,000
NS	08/12/97	Soil	Sanitary Tile Field	BPLANT-97-0012	75,000
NS	08/19/97	Paint Chip	UN-216-W-28 (Outside the 211-U Tank Farm Perimeter)	CC:Mail dated 8/19/97	15,000
NS	08/18/97	Soil Specks	152-TX Perimeter	TANKFARM-97-0069	150,000
NS	08/22/97	Spock	Under painted surface of 307 Basins	300LEF-97-0004	750,000
NS	08/26/97	Mouse Urine	Underside cone #64-15027 & Concrete Pad	SS-97-050	95,000
NS	08/26/97	Tumbleweed Fragments	Trench #94 in 216-E-12B	SOLIDWASTE-97-0011	250,000
NS	09/08/97	Mouse Feces	2711-E Vehicle Maintenance Facility (vehicle IC-439)	CC:Mail dated 9/08/97	55,000
NS	09/11/97	Soil	222-S Radiation Material Area	ANALLAB-97-0026	85,000

Note: Activity is reported in disintegrations per minute beta/gamma.

3.2 SURVEILLANCE/COMPLIANCE REPORTS CLOSED

No SCIRs were closed during the third quarter of 1997.

3.4 STATUS OF OPEN SURVEILLANCE AND COMPLIANCE REPORTS

Five SCIRs, from past activities, remained open at the end of the third quarter of 1997. These reports are summarized on Table 1 to include the referenced site number, priority ranking points (maximum of 15 points based on contamination levels, location and mobility), responsible custodian, SCIR report number, and estimated completion date.

Abbreviations used on Table 1 include:

CAR - Compliance Assessment Report
SCIR - Surveillance/Compliance Inspection Report
ECD - Estimated Completion Date
ERC - Environmental Restoration Contractor
TFO - Tank Farm Operations
PTS - Points
TBD - To Be Determined

4.0 SUMMARY

All the routine outdoor radiological surveys were completed during third quarter of calendar year 1997 in the 100, 200-East/West, 300 and 600 areas with the exception of the REDOX rail road cut. Physical constraints prevented this scheduled survey.

The second quarter routine surveys were performed during the third quarter due to requested schedule changes by the ERC team.

No SCIRs were closed (Section 3.2)

Five SCIRs remain open. Open reports have been addressed and clean-up plans with completion dates are being developed or are to be provided to Environmental Monitoring and Investigations.

RADIOLOGICAL POSTING CHANGES

An on going effort to stabilize and/or clean up areas of known contamination and to down post or release these areas from posting is being performed by the Environmental Restoration Contractor and by the facility managers. In the third quarter of 1997, 2.0 hectares (5.0 acres) were stabilized and down posted from CA/SC to URM. From the beginning of 1991 through the end of the third quarter of 1997, 560 hectares (1,384 acres) have been stabilized and down posted to URM with 4,006 hectares (9,893 acres) remaining to be stabilized and down posted or cleaned up and released. Table 3 shows the downward trend of the contamination status during this time period.

Radiological posting changes, by waste site, noted during the third quarter of calendar year of 1997 are as follows:

The surface soil contaminated section of the 216-A-25 (Gable Mountain Pond) extension discovered during the radiological mapping fly over in 1996, was cleaned up and down posted from CA/SCA to URM, 2.0 hectares (5.0 acres).

The Environmental Restoration Disposal Facility (ERDF) started receiving waste in July 1996. Currently the ERDF consists of two cells, measuring 230 m. (750 ft.) wide by 305 m. (100 ft.) long and 24 m. (80 ft.) deep, capable of holding 1.4 million tons of waste material. A milestone was reached in September 1997 with the ERDF having received 500,000 tons of contaminated waste. The waste came from remediation activities in the 100B/C, 100D, and 300 Areas. Mapping the changes in contamination and underground radiation areas in the ERDF will be conducted semiannually. Currently there are 13.9 hectares (34.4 acres) available for waste disposal. This is the first quarter that the posting changes have been added to this report, with the URM area being reported as 1.9 hectares (4.8 acres) and the contamination area being reported as 1.1 hectares (2.7 acres).

Table 3. Outdoor Contamination Status 1991 through 1997
[approximate surface area in hectares (acres)]

Hanford Site Area	1991	1992	1993	1994	1995	1996 ^a	1997
100 Areas	65(160)	65(160)	65(160)	63(155)	52(129)	47(116)	47(116)
200 Areas	157(389)	133(329)	129(318)	105(261)	92(228)	99(245)	89(220)
300 Areas	18(45)	18(45)	18(45)	21(52)	21(52)	20(49)	20(49)
600 & BC Control Areas	1,465(3,620)	1,060(2,620)	1,063(2,627)	1,063(2,627)	1,063(2,627)	3,850(9,513) ^b	3,850(9,513) ^c
Totals	1,705(4,214)	1,276(3,154)	1,275(3,150)	1,320(3,261)	1,275(3,150)	4,016(9,923)	4,006(9,898)

Note: ^a There are some discrepancies as to the total acreage reported and areas remediated. This is due to the gained accuracy in measurement from the exclusive use of GPS equipment for the measurement of the contaminated surface areas.

^b The large increase in 600 & BC Control Areas is due to increased acreage posted around the BC Control Area.

^c The ERDF has been added during the 3rd quarter of 1997, 1.9 ha (4.8 acres).

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