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**Hazard Ranking System
Evaluation of CERCLA Inactive
Waste Sites at Hanford**

**Volume 3 - Unplanned-Release Sites
(HISS Data Base)**

R. D. Stenner	D. A. Lamar
K. H. Cramer	T. J. McLaughlin
K. A. Higley	D. R. Sherwood
S. J. Jette	N. C. Van Houten

October 1988

**Prepared for the U.S. Department of Energy
under Contract DE-AC06-76RLO 1830**

**Pacific Northwest Laboratory
Operated for the U.S. Department of Energy
by Battelle Memorial Institute**



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HAZARD RANKING SYSTEM EVALUATION OF CERCLA
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HISS DATA BASE

The HISS (Hanford Inactive Site Survey) Data Base is a computerized data file documenting past waste-disposal operations and unplanned release information for sites at Hanford. Volume 3 contains the HISS files for Hanford's unplanned chemical and radiological releases to the environment. Table 1 indicates the type of information contained in these files that is unique to each individual site.

The physical features and history of each unplanned release is provided in the HISS Data Base. All appropriate quantities of chemicals released and their inventories are included for each site independently. This information is based on previous documentation contained in radiation-occurrence reports, unusual-occurrence reports, and unusual-event reports generated since nuclear activities began on what is now the Hanford Site.

TABLE 1. Sample Data Base Sheet

SITE ID NO.: The appropriate designation for Hanford unplanned releases

DIMENSIONS: The dimensions of the unplanned release

Length:
Width:
Depth:
Area:

ELEVATION: The elevation above mean sea level

WATER TABLE: The distance from the unplanned release to the water table

HRS MIGRATION SCORE: Site migration score from HRS evaluation

LOCATION: The general area in which the unplanned release occurred

COORDINATES: The exact location of the unplanned release

DESCRIPTION OF RELEASE: A brief description of the events surrounding the unplanned release

DATE OF OCCURRENCE: The date in which the release occurred

DESCRIPTION OF WASTE: A description of the constituents involved in the release

EXTENT OF CONTAMINATION: A brief description of the size and location of the release

REMEDIAL ACTION: An explanation of the corrective action.

REFERENCES: All appropriate documentation used in the analysis of this data base

Documents: See the reference list by document number at the conclusion of Volume 3

Photographs: Photos may be ordered by their appropriate photo identification number from: Pacific Northwest Laboratory, Richland, WA

Drawings: Drawings may be ordered by their appropriate drawing number from: Westinghouse Hanford Company, Engineering Files, Richland, WA

PREFACE

The purpose of this report is to formally document the assessment activities at the U.S. Department of Energy (DOE) Hanford Site. These activities were carried out pursuant to the DOE orders that address the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Program for the cleanup of inactive waste sites. The DOE orders incorporate the U.S. Environmental Protection Agency methodology, which is based on the Superfund Amendments and Reauthorization Act of 1986. This methodology includes: PA/SI, remedial investigation/feasibility study, record of decision, design and implementation or remedial action, operation and monitoring, and verification monitoring.

Volume 1 of this report discusses the CERCLA inactive waste-site evaluation process, assumptions, and results of the Hazard Ranking System methodology employed.

Volume 2 presents the data on the individual CERCLA engineered-facility sites at Hanford, as contained in the Hanford Inactive Site Surveillance (HISS) Data Base.

Volume 3 presents the data on the individual CERCLA unplanned-release sites at Hanford, as contained in the HISS Data Base.

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100 AREA UNPLANNED-RELEASE SITES

The following sites are included in this section.

<u>100-F Area</u>	<u>100-N Area</u>
UPR-100-F-1	UPR-100-N-1
	UPR-100-N-2
	UPR-100-N-3
<u>100-K Area</u>	UPR-100-N-4
UPR-100-K-1	UPR-100-N-5
	UPR-100-N-8
	UPR-100-N-9
	UPR-100-N-10
	UPR-100-N-11
	UPR-100-N-12
	UPR-100-N-13
	UPR-100-N-14
	UPR-100-N-17
	UPR-100-N-18
	UPR-100-N-25
	UPR-100-N-26
	UPR-100-N-29
	UPR-100-N-30
	UPR-100-N-31
	UPR-100-N-32
	UPR-100-N-34

SITE ID NO.: UPR-100-F-1

DIMENSIONS:

Length:
Width:
Depth:
Area: 1600 square feet

ELEVATION: 420 feet
WATERTABLE: 50 feet

LOCATION: 100-F
COORDINATES:

HRS Migration Score: 7.131

DESCRIPTION OF RELEASE:

The main sewer lines from 141-C to 141-M Buildings became plugged and spread contamination on the ground.

DATE OF OCCURRENCE: March 13, 1971

DESCRIPTION OF WASTE:

Approximately 17,000 gallons of wash water used to clean out animal pens containing .00004 Ci Sr-90 and .000001 Ci of Pu-239.

EXTENT OF CONTAMINATION:

A 40 foot by 40 foot area between the 141-C and 141-M Buildings.

REMEDIAL ACTION:

The area was stabilized with clean gravel and is now within the permanent AC-5-40 markers.

REFERENCES:

Documents: ERDA-1538
Photographs:
Drawings:

SITE ID NO.: UPR-100-K-1

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 480 feet

WATERTABLE: 70 feet

LOCATION: 100-KE

COORDINATES:

HRS Migration Score: 53.242

DESCRIPTION OF RELEASE:

The 105-KE pickup chute area (of the 105-KE fuel storage basin) had an estimated seepage to ground of more than 450 gallons per minute for an unknown period of time.

DATE OF OCCURRENCE: April, 1979

DESCRIPTION OF WASTE:

Fuel storage basin effluent which included debris from fuel cladding failures.

EXTENT OF CONTAMINATION:

The release was completely below ground and caused no surface contamination. Contaminated soil beneath the basin estimated to have 2530 ci total activity including 1.3 ci Pu-239/240.

REMEDIAL ACTION:

The seepage area has been repaired.

REFERENCES:

Documents: ERDA-1538, PNL-5265 (Dec. 1984)

Photographs:

Drawings:

SITE ID NO.: UPR-100-N-1

DIMENSIONS:

Length: 150 feet
Width: 150 feet
Depth:
Area: 150 square feet

ELEVATION: 470 feet

WATERTABLE: 60 feet

LOCATION: 100-N

COORDINATES: N(N)6250/W(N)6625

HRS Migration Score: 44.368

DESCRIPTION OF RELEASE:

30,000 gallons of radioactive water (.2 Ci) leaked onto the ground due to a line leak from the inlet valve box near the 1304-N Emergency Dump Tank.

DATE OF OCCURRENCE: March 27, 1974

DESCRIPTION OF WASTE:

Filtered water (30,000 gallons) containing .2 Ci of radioactive constituents.

EXTENT OF CONTAMINATION:

An area approximately 150 square feet. The water ran down the bank from the emergency dump tank, covered the roadway below the tank, and extended to the front of the 181-N Building.

REMEDIAL ACTION:

Most of the contaminated soil was removed and the remainder was covered with clean fill.

REFERENCES:

Documents: Unusual Occurrence Report No. 74-5
Photographs:
Drawings: H-1-48890

SITE ID NO.: UPR-100-N-2

DIMENSIONS:

Length: 17 feet
Width: 17 feet
Depth: 10 feet
Area: 300 square feet

ELEVATION: 470 feet

WATERTABLE: 60 feet

LOCATION: 100-N

HRS Migration Score: 44.368

COORDINATES:

DESCRIPTION OF RELEASE:

A crack in a 1 inch body relief drain line from the FLV858 valve leaked thermally hot water on the ground. The leak rate was estimated at 10 gallons per minute and was determined to be due to corrosion of the valve.

DATE OF OCCURRENCE: February 19, 1980

DESCRIPTION OF WASTE:

Primary coolant water containing less than 1 Ci of beta/gamma.
Total volume 25,000 to 30,000 gallons.

EXTENT OF CONTAMINATION:

Approximately 300 square feet of soil in the vicinity of the FLV858 valve.

REMEDIAL ACTION:

The slightly contaminated soil was removed during excavation to repair the leak and was stabilized to prevent spread of low level contamination. Contaminated dirt was sent to the 200 Area burial ground.

REFERENCES:

Documents: Unusual Occurrence Report No. 80-6
Photographs:
Drawings: H-1-48890

SITE ID NO.: UPR-100-N-3

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 470 feet
WATERTABLE: 60 feet

LOCATION: 100-N
COORDINATES: N(N)6300/W(N)6500

HRS Migration Score: 73.947

DESCRIPTION OF RELEASE:

A leak in the dummy fuel spacer transfer line, a 3 inch reinforced plastic pipe extending from the 100-N fuel storage basin to the dummy disposal pit. The leak rate was estimated to be 25 gallons per minute.

DATE OF OCCURRENCE: March 8, 1978

DESCRIPTION OF WASTE:

An estimated 360,000 gallons of storage basin water entered the ground north of the lift station. Estimated radionuclide releases to the soil were: .07 Ci Co-60, .80 Ci Sr-90, .25 Ci Cs-137, .14 Ci CePr-144, .0004Ci Pu-239, 1.0 Ci H-3 (Assumed).

EXTENT OF CONTAMINATION:

It was not known how long the leak had been occurring, however, due to the size of the sink hole, it was judged that it occurred within a week prior to its identification. Sink hole 4 feet diameter and 30 inches deep was formed by the estimated 25 GPM leak.

REMEDIAL ACTION:

The line was repaired and the contaminated soil removed from the excavation to the 200 Area Burial Ground for disposal.

REFERENCES:

Documents: Unusual Occurrence Report No. 78-7
Photographs:
Drawings: H-1-48890

SITE ID NO.: UPR-100-N-4

DIMENSIONS:

Length: 10 feet
Width: 10 feet
Depth:
Area: 1500 sq. ft.

ELEVATION: 470 feet
WATERTABLE: 60 feet

LOCATION: 100-N
COORDINATES: N(N)6750/W(N)6000

HRS Migration Score: 4.754

DESCRIPTION OF RELEASE:

The 1322-A sump overflowed and radioactive water was released to the soil.

DATE OF OCCURRENCE: May 7, 1977

DESCRIPTION OF WASTE:

Low level radioactive water. Total activity was .5 mCi.

EXTENT OF CONTAMINATION:

An area of soil near the sump approximately 1500 square feet.

REMEDIAL ACTION:

Most of the contaminated soil was removed and replaced with clean fill.

REFERENCES:

Documents: Unusual Occurrence Report No. 77-14
Photographs:
Drawings: H-1-48890

SITE ID NO.: UPR-100-N-5

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 470 feet
WATERTABLE: 60 feet

LOCATION: 100-N
COORDINATES: N(N)6750/W(N)6000

HRS Migration Score: 68.031

DESCRIPTION OF RELEASE:

A leak occurred in the piping at the radioactive chemical waste handling facility. Approximately 90,000 gallons of radioactive waste was discharged to the ground.

DATE OF OCCURRENCE: June 27, 1972

DESCRIPTION OF WASTE:

Low level radioactive waste water (containing decontaminated chemicals). The waste contained 35 Ci of activity of which 26 Ci were Co-60. The solution had a pH of about 9.

EXTENT OF CONTAMINATION:

The extent of the contamination was not addressed in the report.

REMEDIAL ACTION:

The contaminated soil was removed and sent to the burial ground. The excavation was then backfilled with clean soil.

REFERENCES:

Documents: Unusual Occurrence Report No. 72-6
Photographs:
Drawings: H-1-48890

SITE ID NO.: UPR-100-N-8

DIMENSIONS:

Length: 10 feet
Width: 10 feet
Depth:
Area: 25 sq. ft.

ELEVATION:
WATERTABLE:

LOCATION: 100-N
COORDINATES: N(N)6750/W(N)6000

HRS Migration Score: 4.754

DESCRIPTION OF RELEASE:

The 1322-A sump overflowed and approximately 50 to 100 gallons of radioactive water was released to the soil.

DATE OF OCCURRENCE: May 11, 1975

DESCRIPTION OF WASTE:

Low level radioactive water. Total activity was less than .5 mCi.

EXTENT OF CONTAMINATION:

An area of soil near the sump, approximately 25 sq. ft.

REMEDIAL ACTION:

Most of the contaminated soil was removed and replaced with clean fill.

REFERENCES:

Documents: Unusual Occurrence Report No. 75-16
Photographs:
Drawings: H-1-48890

SITE ID NO.: UPR-100-N-9

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 470 feet

WATERTABLE: 60 feet

LOCATION: 100-N

COORDINATES:

HRS Migration Score: 47.326

DESCRIPTION OF RELEASE:

A backhoe mistakenly hooked onto a buried 2 inch valve in a drain line during exploratory digging. This resulted in an immediate flow of radioactive water from the vicinity of the valve.

DATE OF OCCURRENCE: October 14, 1974

DESCRIPTION OF WASTE:

An estimated total quantity of 2,200 gallons of contaminated water (500,000 pCi) from the 119-N cooling water drain line was released.

EXTENT OF CONTAMINATION:

The extent of the contamination was not discussed in the report.

REMEDIAL ACTION:

The contaminated excavation spoils were removed to the 200 Area Burial Ground.

REFERENCES:

Documents: Unusual Occurrence Report No. 74-29

Photographs:

Drawings: H-1-48890

SITE ID NO.: UPR-100-N-10

DIMENSIONS:

Length: 10 feet
Width: 10 feet
Depth:
Area: 100 square feet

ELEVATION: 470 feet
WATERTABLE: 60 feet

LOCATION: 100-N
COORDINATES:

HRS Migration Score: 5.646

DESCRIPTION OF RELEASE:

Contaminated water leaked to the ground during preparations for the removal of a check valve in the gravity drain line to the lift station. The lift station serves to collect contaminated water from various contaminated drains in the 105-N Building and pump the water to the 1301-N crib via the 36 inch line.

DATE OF OCCURRENCE: May 13, 1975

DESCRIPTION OF WASTE:

A maximum of 100 gallons leaked to the ground contaminating approximately 100 square feet with 1 mCi of mixed fission and activation products.

EXTENT OF CONTAMINATION:

An area of soil 100 square feet.

REMEDIAL ACTION:

Pumps were shut down and a small dirt dam was built to confine the water within the existing Radiation Zone boundary.

REFERENCES:

Documents: Unusual Occurrence Report No. 75-18
Photographs:
Drawings: H-1-48890

SITE ID NO.: UPR-100-N-12

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 470 feet

WATERTABLE: 60 feet

LOCATION: 100-N
COORDINATES:

HRS Migration Score: 70.989

DESCRIPTION OF RELEASE:

A leak in the spacer transport line was discovered when a 2 foot by 3 foot sink hole was noticed in a previously backfilled zone.

DATE OF OCCURRENCE: February 27, 1979

DESCRIPTION OF WASTE:

The pipe contained fuel spacers. The soil was checked for radioactivity and read 50-100 Mrads/hr. An estimated 250,000 gallons of basin water containing .19 Ci Co-60, .4 Ci Cs-137 and .00057 Ci of Pu-239/240 was discharged.

EXTENT OF CONTAMINATION:

The extent of the contamination was not addressed in the report, however, it was mentioned that the sink hole was 2 feet x 3 feet and 18 inches deep.

REMEDIAL ACTION:

The pipe leak was repaired.

REFERENCES:

Documents: Unusual Occurrence Report No. 79-8
Photographs:
Drawings: H-1-48890

SITE ID NO.: UPR-100-N-13

DIMENSIONS:

Length: 20 feet

Width: 20 feet

Depth:

Area:

ELEVATION: 470 feet

WATERTABLE: 60 feet

LOCATION: 100-N

COORDINATES:

HRS Migration Score: 5.646

DESCRIPTION OF RELEASE:

N Plant Operations personnel were filling a railroad waste tank car with spent decontamination solutions at the 1314-N Loading Station. After approximately 7,000 gallons of solution had been pumped into the 20,000-gallon waste tank car, solution began overflowing from the tank car fittings. The tank car loading pump was turned off, then solution began flowing up through the drain in the catch basin beneath the car. The catch basin filled and overflowed into the adjacent dry well which also filled and overflowed. Approximately 100 gallons of solution flowed out of the dry well, covering a 20 foot by 20 foot section of ground inside the Radiation Zone at the loading station.

DATE OF OCCURRENCE: September 24, 1973

DESCRIPTION OF WASTE:

Approximately 75 gallons of spent decontamination solution containing .011 Ci was discharged to the ground through the dry well.

EXTENT OF CONTAMINATION:

A 20 foot by 20 foot area of soil near the railroad loading station.

REMEDIAL ACTION:

The contaminated soil was properly packaged and shipped to the 200 Area Burial Ground.

REFERENCES:

Documents: Unusual Occurrence Report No. 73-39

Photographs:

Drawings: H-1-48890

SITE ID NO.: UPR-100-N-14

DIMENSIONS:

Length: 30 feet
Width: 30 feet
Depth:
Area: 800 square feet

ELEVATION: 470 feet

WATERTABLE: 60 feet

LOCATION: 100-N

HRS Migration Score: 5.646

COORDINATES:

DESCRIPTION OF RELEASE:

While maintenance personnel were working on the 119-N drain system, backflow from the drain occurred. An estimated 70 gallons effluent water was discharged to the ground near the building.

DATE OF OCCURRENCE: August 5, 1974

DESCRIPTION OF WASTE:

Approximately 70 gallons of effluent water containing .0008 Ci of beta/gamma activity.

EXTENT OF CONTAMINATION:

Approximately 800 square feet of soil near the 119-N sample building.

REMEDIAL ACTION:

The area was backfilled with clean soil.

REFERENCES:

Documents: Unusual Occurrence Report No. 74-24
Photographs:
Drawings: H-1-48890

SITE ID NO.: UPR-100-N-17

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 480 feet

WATERTABLE: 60 feet

LOCATION: 100-N

HRS Migration Score: 50.284

COORDINATES:

DESCRIPTION OF RELEASE:

External corrosion caused leakage in the 166-N Diesel oil supply line.

DATE OF OCCURRENCE: August, 1966

DESCRIPTION OF WASTE:

80,000 gallons of diesel oil.

EXTENT OF CONTAMINATION:

The diesel oil drained through the soil to ground water where it migrated to the Columbia River.

REMEDIAL ACTION:

The line was excavated and repaired in September, 1966. Oil near the river was collected in an interceptor trench and periodically burned off during 1967.

REFERENCES:

Documents: UNI-228, Rev. 4

Photographs:

Drawings:

SITE ID NO.: UPR-100-N-18

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 480 feet

WATERTABLE: 60 feet

LOCATION: 100-N

COORDINATES:

HRS Migration Score: 3.863

DESCRIPTION OF RELEASE:

External corrosion caused leakage in the 4 inch diesel oil supply line between 166-N tank farm and the 184-N diesel oil day tank.

DATE OF OCCURRENCE: August, 1973

DESCRIPTION OF WASTE:

200 gallons of diesel oil.

EXTENT OF CONTAMINATION:

Unknown.

REMEDIAL ACTION:

The line was excavated and repaired.

REFERENCES:

Documents: Unusual Occurrence Report No. 73-23

Photographs:

Drawings:

SITE ID NO.: UPR-100-N-25

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 480 feet

WATERTABLE: 60 feet

LOCATION: 100-N

COORDINATES:

HRS Migration Score: 5.646

DESCRIPTION OF RELEASE:

The 1310-N Tank was vented releasing 500 gallons of reactor decontamination solution to the ground.

DATE OF OCCURRENCE: May 15, 1975

DESCRIPTION OF WASTE:

500 gallons of primary loop water and decontamination solution containing phosphoric acid and diethylthiourea.

EXTENT OF CONTAMINATION:

Not known, however radiation survey showed no contamination outside of posted zone.

REMEDIAL ACTION:

None.

REFERENCES:

Documents: Unusual Occurrence Report No.: 75-19

Photographs:

Drawings: H-1-32236

SITE ID NO.: UPR-100-N-26

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 480 feet
WATERTABLE: 60 feet

LOCATION: 100-N
COORDINATES:

HRS Migration Score: 5.646

DESCRIPTION OF RELEASE:

1000 gallons of reactor decontamination solution backflowed while being pumped into a tank car, contaminating the floor of the valve pit.

DATE OF OCCURRENCE: December 7, 1978

DESCRIPTION OF WASTE:

1000 gallons of reactor decontamination solution containing phosphoric acid and diethylthiouren.

EXTENT OF CONTAMINATION:

The valve pit at the 1314-N Radioactive liquid waste load out facility.

REMEDIAL ACTION:

The 1000 gallons of solution was pumped into the tank car. The remaining solution was absorbed and sent to the 200 Area Burial Ground.

REFERENCES:

Documents: Unusual Occurrence Report No. 78-42
Photographs:
Drawings: H-1-37677

SITE ID NO.: UPR-100-N-29

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 480 feet
WATERTABLE: 60 feet

LOCATION: 100-N
COORDINATES:

HRS Migration Score: 2.878

DESCRIPTION OF RELEASE:

A leaking check valve caused a release of 100 gallons of primary coolant water.

DATE OF OCCURRENCE: April 23, 1974

DESCRIPTION OF WASTE:

100 gallons of primary coolant water containing radioactive fission and activation products (mostly Mn-56 and Na-24).

EXTENT OF CONTAMINATION:

A 30 foot by 4 foot section of soil on the east side of the 1304-N Emergency Dump Tank.

REMEDIAL ACTION:

The contaminated soil was removed and sent to the 200 Area Burial Ground for disposal.

REFERENCES:

Documents: Unusual Occurrence Report No. 74-10
Photographs:
Drawings:

SITE ID NO.: UPR-100-N-30

DIMENSIONS:

Length: 50 feet
Width: 50 feet
Depth:
Area: 2500 square feet

ELEVATION: 480 feet
WATERTABLE: 60 feet

LOCATION: 100-N
COORDINATES:

HRS Migration Score: 5.646

DESCRIPTION OF RELEASE:

The 1304-N Emergency Dump Tank overflowed spilling an estimated 2,500 gallons of primary coolant water during a drawdown test, contaminating an area approximately 2,500 square feet to a maximum of 500 counts/min.

DATE OF OCCURRENCE: July 22, 1974

DESCRIPTION OF WASTE:

2,500 gallons of primary coolant water containing fission and activation products.

EXTENT OF CONTAMINATION:

An area 50 feet by 50 feet. No water reached the river.

REMEDIAL ACTION:

The contaminated area was marked as a radiation zone and sand and fines were used to stabilize the area.

REFERENCES:

Documents: Unusual Occurrence Report No. 74-21
Photographs:
Drawings:

SITE ID NO.: UPR-100-N-32

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 480 feet
WATERTABLE: 60 feet

LOCATION: 100-N
COORDINATES:

HRS Migration Score: 5.646

DESCRIPTION OF RELEASE:

A leaking check valve in the Emergency Dump Tank Bypass Line released 500 - 1,000 gallons of radioactive effluent water to the ground.

DATE OF OCCURRENCE: September 16, 1974

DESCRIPTION OF WASTE:

500 - 1000 gallons of radioactive effluent water containing fission and activation products. A mud sample taken read 20,000 counts/minute. The water was analyzed for gross activity to provide an estimate of activity of less than 10 mCi of radioactive material remaining on the ground.

EXTENT OF CONTAMINATION:

A section of soil four feet from the southeast side of the 1304-N emergency Dump Tank.

REMEDIAL ACTION:

The contaminated soil was removed and disposed of in the 200 Area Burial Ground.

REFERENCES:

Documents: Unusual Occurrence Report No. 74-25
Photographs:
Drawings:

SITE ID NO.: UPR-100-N-34

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION:

WATERTABLE:

LOCATION: 100 N

HRS Migration Score: 4.159

COORDINATES:

DESCRIPTION OF RELEASE:

WPPSS supervision called the 105-N control room and reported a large cloud of steam in the vicinity of the WPPSS trestle. An investigation revealed liquid spurting several feet into the air from sulfuric acid - sodium hydroxide line encasement at the encasement sump. The weekly sulfuric acid transfer from 108-N to 163-N was in progress. It was subsequently determined that approximately 3400 gallons of 94% sulfuric acid had been transferred from the storage tank at 108-N and none had been received at the 163-N storage tank.

DATE OF OCCURRENCE: May 12, 1980

DESCRIPTION OF WASTE:

3400 gallons of 94% sulfuric acid.

EXTENT OF CONTAMINATION:

The sulfuric acid transfer line in the vicinity of the sump.

REMEDIAL ACTION:

The acid in the encasement was neutralized with 50% sodium hydroxide and pumped to the clearwell overflow. The acid that overflowed to the surrounding ground was neutralized with soda ash and liquid sodium hydroxide. Arrangements were made for delivery of sulfuric acid by tank truck until the line can be repaired. Additional corrective action may have been provided.

REFERENCES:

Documents: Unusual Event Report No. 17-80

Photographs:

Drawings:

200-EAST AREA UNPLANNED-RELEASE SITES

The following sites are included in this section.

200-East Area

UPR-200-E-1	UPR-200-E-34	UPR-200-E-81
UPR-200-E-2	UPR-200-E-35	UPR-200-E-82
UPR-200-E-3	UPR-200-E-36	UPR-200-E-83
UPR-200-E-4	UPR-200-E-37	UPR-200-E-84
UPR-200-E-5	UPR-200-E-38	UPR-200-E-85
UPR-200-E-6	UPR-200-E-39	UPR-200-E-86
UPR-200-E-7	UPR-200-E-40	UPR-200-E-87
UPR-200-E-9	UPR-200-E-41	UPR-200-E-89
UPR-200-E-10	UPR-200-E-42	UPR-200-E-91
UPR-200-E-11	UPR-200-E-43	UPR-200-E-92
UPR-200-E-12	UPR-200-E-44	UPR-200-E-94
UPR-200-E-13	UPR-200-E-45	UPR-200-E-95
UPR-200-E-14	UPR-200-E-47	UPR-200-E-96
UPR-200-E-15	UPR-200-E-48	UPR-200-E-97
UPR-200-E-16	UPR-200-E-49	UPR-200-E-98
UPR-200-E-17	UPR-200-E-50	UPR-200-E-99
UPR-200-E-18	UPR-200-E-51	UPR-200-E-103
UPR-200-E-19	UPR-200-E-52	UPR-200-E-105
UPR-200-E-20	UPR-200-E-53	UPR-200-E-106
UPR-200-E-21	UPR-200-E-54	UPR-200-E-107
UPR-200-E-22	UPR-200-E-55	UPR-200-E-108
UPR-200-E-23	UPR-200-E-56	UPR-200-E-109
UPR-200-E-24	UPR-200-E-58	UPR-200-E-110
UPR-200-E-25	UPR-200-E-59	UPR-200-E-111
UPR-200-E-26	UPR-200-E-73	UPR-200-E-112
UPR-200-E-27	UPR-200-E-74	UPR-200-E-114
UPR-200-E-28	UPR-200-E-75	UPR-200-E-115
UPR-200-E-29	UPR-200-E-76	UPR-200-E-116
UPR-200-E-30	UPR-200-E-77	UPR-200-E-117
UPR-200-E-31	UPR-200-E-78	UPR-200-E-118
UPR-200-E-32	UPR-200-E-79	UPR-200-E-119
UPR-200-E-33	UPR-200-E-80	UPR-200-E-120

SITE ID NO.: UPR-200-E-1

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 701 feet
WATERTABLE: 296 feet

LOCATION: 200 East
COORDINATES: N42535/W53780

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Soil contamination as a result of a failed process line from 221-B on June 17, 1946.

DATE OF OCCURRENCE: June 17, 1946

DESCRIPTION OF WASTE:

Unknown beta/gamma.

EXTENT OF CONTAMINATION:

An area south of 221-B, approximately 80 ft. from the previous line failure. Radiation intensity at ground level was 400 r/hr.

REMEDIAL ACTION:

The area above the waste lines was covered with several feet of gravel.

REFERENCES:

Documents: ARH-780
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-2

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 702 feet

WATERTABLE: 300 feet

LOCATION: 200 East

COORDINATES: N42550/W53700

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Spotty contamination was detected in an area around the B and T Plant stacks.

DATE OF OCCURRENCE: November 18, 1947

DESCRIPTION OF WASTE:

Not identified in reference.

EXTENT OF CONTAMINATION:

1000 foot radius around the B and T plant stacks.

REMEDIAL ACTION:

Project Engineering was requested to undertake design work.

REFERENCES:

Documents: ARH-780

Photographs:

Drawings:

SITE ID NO.: UPR-200-E-3

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 644 feet
WATERTABLE: 241 feet

LOCATION: 200 East
COORDINATES: N42550/W53750

HRS Migration Score: 1.089

DESCRIPTION OF RELEASE:

Failure of first-cycle waste line from the 221-B Bldg. to
241-BX-154 Tank.

DATE OF OCCURRENCE: November 21, 1951

DESCRIPTION OF WASTE:

Unknown beta/gamma.

EXTENT OF CONTAMINATION:

An area between the 221-B Bldg. and 241-BX-154 Tank.

REMEDIAL ACTION:

Efforts to excavate and inspect for the cause were abandoned when
readings of 120 r/hr were met with 18 inches of soil still
remaining over the pipe.

REFERENCES:

Documents: ARH-780
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-4

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 644 feet

WATERTABLE: 241 feet

LOCATION: 200 East
COORDINATES: N44000/W52950

HRS Migration Score: 1.143

DESCRIPTION OF RELEASE:

Leakage from the 241-B-151 diversion box contaminated the soil in the immediate vicinity.

DATE OF OCCURRENCE: Fall, 1951

DESCRIPTION OF WASTE:

Fission products - approximately 10 Ci.

EXTENT OF CONTAMINATION:

An area around the 241-B-151 diversion Box.

REMEDIAL ACTION:

Most of the contamination was removed and buried. The remainder was covered with approximately one foot of clean soil.

REFERENCES:

Documents: ARH-2757

Photographs:

Drawings: H-2-44500 Sheet 7

SITE ID NO.: UPR-200-E-5

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 664 feet

WATERTABLE: 263 feet

LOCATION: 200 East
COORDINATES: N45500/W53400

HRS Migration Score: 1.198

DESCRIPTION OF RELEASE:

A cascade outlet became plugged, contaminating the soil near the 102-BX Tank.

DATE OF OCCURRENCE: March 20, 1951

DESCRIPTION OF WASTE:

22.5 tons of depleted uranium.

EXTENT OF CONTAMINATION:

An area near the 102-BX Tank.

REMEDIAL ACTION:

No mention of any action concerning cleanup.

REFERENCES:

Documents: ARH-780

Photographs:

Drawings:

SITE ID NO.: UPR-200-E-6

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 644 feet
WATERTABLE: 241 feet

LOCATION: 200 East
COORDINATES: N45100/W52900

HRS Migration Score: 1.089

DESCRIPTION OF RELEASE:

Leakage from the 241-B-153 diversion box contaminated the soil in the immediate vicinity.

DATE OF OCCURRENCE: 1954

DESCRIPTION OF WASTE:

Fission products - approximately 1 Ci.

EXTENT OF CONTAMINATION:

An area around the 241-B-153 diversion box.

REMEDIAL ACTION:

The contamination was covered with clean gravel.

REFERENCES:

Documents: ARH-2757
Photographs:
Drawings: H-2-44500 Sheet 7

SITE ID NO.: UPR-200-E-7

DIMENSIONS:

Length: 30 feet
Width: 30 feet
Depth:
Area:

ELEVATION: 678 feet
WATERTABLE: 275 feet

LOCATION: 200 East
COORDINATES: N43757/W52617

HRS Migration Score: 1.452

DESCRIPTION OF RELEASE:

A leak in the waste line from the 221-B Bldg. to 241-B-361.

DATE OF OCCURRENCE: November 30, 1954

DESCRIPTION OF WASTE:

Approximately 5,000 gal. of cell wash water. Maximum dose rate of 1.7 r/hr.

EXTENT OF CONTAMINATION:

An area 30 ft. square near the 216-B-9 Crib and Tile Field.

REMEDIAL ACTION:

The contamination was covered and the area was posted as "Underground Contamination."

REFERENCES:

Documents: HW-60807
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-9

DIMENSIONS:

Length:
Width:
Depth:
Area:

**ELEVATION:
WATERTABLE:**

LOCATION: 200 East
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

The 216-BY-5 flush tank leaked supernatant waste from the TBP Building to the ground.

DATE OF OCCURRENCE: September 15, 1955

DESCRIPTION OF WASTE:

Approximately 11,000 gallons of supernatant waste from the TBP Bldg.

EXTENT OF CONTAMINATION:

An area directly north of the 216-BY cribs flush tank.

REMEDIAL ACTION:

Most of the waste was removed to a site south of 261-BY-1 crib and covered with 2 ft. of clean soil. The contamination left near the flush tank was covered with 10 ft. of clean soil.

REFERENCES:

Documents: HW-60807
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-10

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 697 feet

WATERTABLE: 293 feet

LOCATION: 200 East
COORDINATES: N41000/W48000

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

PUREX tube bundles in transit for burial provided some spotty ground contamination.

DATE OF OCCURRENCE: October 23, 1957

DESCRIPTION OF WASTE:

Not identified in reference.

EXTENT OF CONTAMINATION:

The PUREX railroad right-of-way.

REMEDIAL ACTION:

Extensive decontamination was required.

REFERENCES:

Documents: ARH-780 (ref. to HW-52864)

Photographs:

Drawings:

SITE ID NO.: UPR-200-E-11

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 694 feet

WATERTABLE: 294 feet

LOCATION: 200 East

COORDINATES: N40680/N48100, N45200/W56800

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Contamination spots were found along the railroad track.
Specific release details are unknown.

DATE OF OCCURRENCE: 1957

DESCRIPTION OF WASTE:

Fission products.

EXTENT OF CONTAMINATION:

The railroad tracks from the PUREX tunnel entrance to the west end of the exclusion fence, the spur into the Industrial Burial Garden #5 and the "TC" spur.

REMEDIAL ACTION:

Most of the contamination was removed. The tracks were marked with stakes and radiation zone signs on either side of the tracks.

REFERENCES:

Documents: HW-60807

Photographs:

Drawings:

SITE ID NO.: UPR-200-E-12

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 697 feet

WATERTABLE: 293 feet

LOCATION: 200 East
COORDINATES: N41000/W48000

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

Contaminated liquid dripped from a burial box in transit to the burial ground.

DATE OF OCCURRENCE: December 23, 1957

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings from 40-1700 mrad/hr.

EXTENT OF CONTAMINATION:

PUREX railroad bed and right-of-way.

REMEDIAL ACTION:

No mention of any action concerning cleanup.

REFERENCES:

Documents: ARH-780 (ref. to HW-53967)

Photographs:

Drawings:

SITE ID NO.: UPR-200-E-13

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 710 feet

WATERTABLE: 305 feet

LOCATION: 200 East
COORDINATES: N39520/W48150

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

The 216-A-4 crib became plugged and flooded an area between the crib and the PUREX stack.

DATE OF OCCURRENCE: December, 1958

DESCRIPTION OF WASTE:

Not identified in reference.

EXTENT OF CONTAMINATION:

An area between the 216-A-4 crib and the PUREX 291-A stack.

REMEDIAL ACTION:

The contaminated soil was removed to a trench along the south boundary of the 216-A-4 crib and covered with a foot of soil.

REFERENCES:

Documents: HW-60807

Photographs:

Drawings:

SITE ID NO.: UPR-200-E-14

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION:

WATERTABLE:

LOCATION: Outside 200 East
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

A break in the dike at 216-B-3 pond caused ground contamination.

DATE OF OCCURRENCE: 1958

DESCRIPTION OF WASTE:

Not identified in reference.

EXTENT OF CONTAMINATION:

A ravine to the east of the 216-B-3 pond.

REMEDIAL ACTION:

Contamination zone was covered with clean soil. The area was removed from radiation zone status in December, 1970.

REFERENCES:

Documents: ARH-2015, ARH-2757

Photographs:

Drawings:

SITE ID NO.: UPR-200-E-15

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 712 feet
WATERTABLE: 298 feet

LOCATION: 200 East
COORDINATES: N39558/W48150

HRS Migration Score: 1.089

DESCRIPTION OF RELEASE:

The 216-A-4 crib became plugged during the jetting of the 216-A-2 catch tank, causing ground contamination.

DATE OF OCCURRENCE: January 21, 1959

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings up to 8 rad/hr.

EXTENT OF CONTAMINATION:

The blacktop area outside the 291-A turbine house.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: ARH-780 (ref. to HW-58711)
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-16

DIMENSIONS:

Length: 50 ft.

Width: 20 ft.

Depth:

Area:

ELEVATION: 683 feet

WATERTABLE: 284 feet

LOCATION: 200 East

COORDINATES: N42900/W48310

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

The 105-C to 108-C overground transfer line broke and contaminated the soil northeast of the 105-C tank pit.

DATE OF OCCURRENCE: 1959

DESCRIPTION OF WASTE:

Purex coating waste.

EXTENT OF CONTAMINATION:

An area about 20 ft. by 50 ft., located 60 feet northeast of the 105-C tank pit.

REMEDIAL ACTION:

The contaminated pipe was buried in a trench near the 241-C fence. The original site was marked with chain and underground radiation zone signs.

REFERENCES:

Documents: HW-60807

Photographs:

Drawings:

SITE ID NO.: UPR-200-E-17

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 708 feet
WATERTABLE: 298 feet

LOCATION: 200 East
COORDINATES: N40330/W48560

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

The 216-A-22 crib inlet failed and contaminated the soil.

DATE OF OCCURRENCE: 1959

DESCRIPTION OF WASTE:

Uranium.

EXTENT OF CONTAMINATION:

The soil on top of the 216-A-22 crib.

REMEDIAL ACTION:

The area was covered over and left unmarked. It is within the 203-A stack radiation zone.

REFERENCES:

Documents: HW-60807

Photographs:

Drawings:

SITE ID NO.: UPR-200-E-18

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 686 feet
WATERTABLE: 282 feet

LOCATION: 200 East
COORDINATES: N41320/W47550

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Moisture dripping from the vent pipe bonnet at the A-8 Proportional Sampler Pit contaminated the ground near the 241-A-271 Bldg.

DATE OF OCCURRENCE: 1959

DESCRIPTION OF WASTE:

Low-level fission products.

EXTENT OF CONTAMINATION:

An area 100 ft. east of the 241-A-271 Bldg.

REMEDIAL ACTION:

Area is marked with stake, chain and radiation zone signs.

REFERENCES:

Documents: HW-60807
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-19

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 708 feet
WATERTABLE: 303 feet

LOCATION: 200 East
COORDINATES: N39750/W47340

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

A drip in the vent pipe bonnet at the A-6 Proportional Sampler Pit contaminated the ground near the 202-A Bldg.

DATE OF OCCURRENCE: 1959

DESCRIPTION OF WASTE:

Low level fission products.

EXTENT OF CONTAMINATION:

An area 600 ft. east of the 202-A Bldg.

REMEDIAL ACTION:

Area is marked with stake, chain and radiation zone signs.

REFERENCES:

Documents: HW-60807
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-20

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 697 feet
WATERTABLE: 293 feet

LOCATION: 200 East
COORDINATES: N41000/W48000

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

PUREX tube bundles in transit for burial provided some spotty ground contamination.

DATE OF OCCURRENCE: November 20, 1959

DESCRIPTION OF WASTE:

Not identified in reference. Readings to 3 rad/hr at 18 inches.

EXTENT OF CONTAMINATION:

The PUREX railroad right-of-way.

REMEDIAL ACTION:

No mention of any action concerning cleanup.

REFERENCES:

Documents: ARH-780 (ref. to HW-62593)
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-21

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 688 feet

WATERTABLE: 290 feet

LOCATION: 200 East
COORDINATES: N39880/W47000

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

The 216-A-6 crib overflowed and caused some soil contamination adjacent to the crib.

DATE OF OCCURRENCE: March 20, 1959

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings to 500 mrad/hr.

EXTENT OF CONTAMINATION:

An area adjacent to the 216-A-6 crib.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: ARH-780 (ref. to HW-59434)

Photographs:

Drawings:

SITE ID NO.: UPR-200-E-22

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 712 feet
WATERTABLE: 298 feet

LOCATION: 200 East
COORDINATES: N39250/W48500

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Discharge from the 291-A stack provided ground contamination.

DATE OF OCCURRENCE: 1959

DESCRIPTION OF WASTE:

Mixed fission products.

EXTENT OF CONTAMINATION:

Ground around the PUREX 291-A stack.

REMEDIAL ACTION:

The area was staked and chained off with radiation zone signs.

REFERENCES:

Documents: HW-60807
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-23

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 696 feet

WATERTABLE: 238 feet

LOCATION: 200 East

HRS Migration Score: 0.817

COORDINATES: N45466/W74435, N45119/W74847, N44602/W74177, N44784/W77535

DESCRIPTION OF RELEASE:

A burial box collapsed during operations in 218-W-1A causing spotty ground contamination.

DATE OF OCCURRENCE: June 10, 1960

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings ranged from 60 mrad/hr at the burial site to approx. 1,000 c/m outside the limited area.

EXTENT OF CONTAMINATION:

A area east and southeast as far as 3 miles beyond the limited area fence.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: HW-84619

Photographs:

Drawings:

SITE ID NO.: UPR-200-E-24

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 640 feet
WATERTABLE: 245 feet

LOCATION: 200 East
COORDINATES: N44000/W49000, N44000/W55800

HRS Migration Score: 0.817

DESCRIPTION OF RELEASE:

The collapse of burial box during burial operations causing spotty ground contamination.

DATE OF OCCURRENCE: June 17, 1960

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings up to 2,000 mr/hr at the trench. Average radiation level inside the burial ground fence was 30 mrad/hr at 4 inches.

EXTENT OF CONTAMINATION:

Contamination in an area from the 200 East Burial Ground to the 200 East Area perimeter fence, a distance of about 2 miles.

REMEDIAL ACTION:

Area roads were washed down and contamination was fixed by spraying water or road oil over the affected areas.

REFERENCES:

Documents: Summary of CPD and Environmental Activities
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-25

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 712 feet

WATERTABLE: 312 feet

LOCATION: 200 East
COORDINATES: N39515/W48700

HRS Migration Score: 1.089

DESCRIPTION OF RELEASE:

Leakage from the 241-A-151 diversion box contaminated an area southwest of PUREX.

DATE OF OCCURRENCE: September 5, 1960

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings to 100,000 c/m.

EXTENT OF CONTAMINATION:

An area southwest of PUREX to 200 ft. beyond the limited area fence.

REMEDIAL ACTION:

No mention of any action concerning cleanup.

REFERENCES:

Documents: HW-84619

Photographs:

Drawings:

SITE ID NO.: UPR-200-E-26

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION:
WATERTABLE:

LOCATION: 200 East
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Leakage from the 241-A-151 diversion box caused an operator to stop transfer, but the process tank emptied and steam blew out of the jumper connection, contaminating an area outside the PUREX fence.

DATE OF OCCURRENCE: September 30, 1960

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings from 1 to 3 mrad/hr near the diversion box and just outside the exclusion fence. General contamination was up to 3,000 c/m.

EXTENT OF CONTAMINATION:

An area to the south and outside of the 200 East Area perimeter fence. The contamination also crossed highway 4-S.

REMEDIAL ACTION:

Ground contamination was removed or stabilized while the roadways were flushed with water.

REFERENCES:

Documents: Summary of CPD and Environmental Activities
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-27

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION:
WATERTABLE:

LOCATION: 200 East
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

At the 241-CR Vault winds provided some spotty ground contamination beyond the area fence.

DATE OF OCCURRENCE: November 1, 1960

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings near vault on the order of 50-100 mrad/hr. Readings outside the fence area up to 40,000 c/m.

EXTENT OF CONTAMINATION:

An area generally east to several hundred feet beyond the limited area fence.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: HW-84619
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-28

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 708 feet

WATERTABLE: 303 feet

LOCATION: 200 East

COORDINATES: N39800/W48100

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

A process vessel steam coil failed which caused ground contamination in the PUREX exclusion area.

DATE OF OCCURRENCE: December 21, 1961

DESCRIPTION OF WASTE:

Fission products.

EXTENT OF CONTAMINATION:

Eastern half of the PUREX exclusion area.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: ARH-780 (ref. to HW-71895)

Photographs:

Drawings: H-2-34761

SITE ID NO.: UPR-200-E-29

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 688 feet
WATERTABLE: 290 feet

LOCATION: 200 East
COORDINATES: N39880/W47000

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

The 216-A-6 crib overflowed outside the area of the crib.

DATE OF OCCURRENCE: January 20, 1961

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings of 30 rad/hr at 4 feet.

EXTENT OF CONTAMINATION:

The 216-A-6 crib area.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: ARH-780 (ref. to HW-67985)
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-30

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 640 feet
WATERTABLE: 245 feet

LOCATION: 200 East
COORDINATES: N44000/W48700

HRS Migration Score: 0.908

DESCRIPTION OF RELEASE:

A burial box collapsed during routine operations spreading contamination within the burial ground.

DATE OF OCCURRENCE: April 20, 1961

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings up to 500 rad/hr.

EXTENT OF CONTAMINATION:

An area of 400,000 square feet. The majority was confined to the 200 East Area Burial Ground chained area.

REMEDIAL ACTION:

Contamination stabilization started immediately after the burial trench involved was backfilled.

REFERENCES:

Documents: Summary of CDP and Environmental Activities, ARH-780
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-31

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 708 feet
WATERTABLE: 303 feet

LOCATION: 200 East
COORDINATES: N39700/W48150

HRS Migration Score:1.034

DESCRIPTION OF RELEASE:

Leakage from the 241-A-151 diversion box contaminated an area near PUREX.

DATE OF OCCURRENCE: October 7, 1961

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings in vicinity of PUREX from 40,000-100,000 c/m. Readings outside limited area fence were an order of magnitude lower and decreased to 1,000 c/m.

EXTENT OF CONTAMINATION:

Contamination spread over PUREX exclusion area and east of PUREX to the west bank of the Columbia River.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: HW-84619
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-32

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 644 feet
WATERTABLE: 255 feet

LOCATION: 200 East
COORDINATES: N44600/W52400

HRS Migration Score: 1.089

DESCRIPTION OF RELEASE:

A coil failed in the 221-B Bldg. (6-1 Rare Earth Storage Tank) which provided a liquid release contaminating the 207-B retention basin and the head end of the 216-B-2-1 ditch.

DATE OF OCCURRENCE: November 7, 1963

DESCRIPTION OF WASTE:

Ce-144 (30 Ci) and Sr-90 (.05 Ci) - dose rates to 500 mrad/hr. Tumbleweeds located at the site read to 50 rad/hr at the surface.

EXTENT OF CONTAMINATION:

The 207-B retention basin, the head end of the 216-B-2-1 ditch and a portion of the road.

REMEDIAL ACTION:

The north section of the basin was sealed with an oil-tar solution. The ditch was covered with clean fill dirt and a plastic weed root barrier. The nearby road surfaces were scraped clean or covered with clean fill dirt.

REFERENCES:

Documents: ARH-780 (ref. to HW-79768) and RHO-CD-673
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-33

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 697 feet
WATERTABLE: 293 feet

LOCATION: 200 East
COORDINATES: N41000/W48000

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

A leaking box in transit to the burial ground contaminated a portion of the railroad right-of-way.

DATE OF OCCURRENCE: March 20, 1964

DESCRIPTION OF WASTE:

Not identified in reference.

EXTENT OF CONTAMINATION:

The railroad right-of-way from PUREX to the 200 East Burial Ground.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: ARH-780 (ref. to HW-81078)
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-34

DIMENSIONS:

Length:
Width:
Depth:
Area:

**ELEVATION:
WATERTABLE:**

LOCATION: 200 East
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

A coil leak in the F-15 PUREX tank and contaminated 216-B-3 (B Pond) and 216-A-25 (Gable Mtn. Pond).

DATE OF OCCURRENCE: June 12, 1964

DESCRIPTION OF WASTE:

Mixed fission products - 10,000 Ci.

EXTENT OF CONTAMINATION:

The release went directly to 216-B-3 (B Pond) and 216-A-25 (Gable Mtn. Pond).

REMEDIAL ACTION:

Action was taken to kill the algae, precipitate the fission products and to cover the inlet ditches.

REFERENCES:

Documents: HW-84619 and ARH-780 (ref. to HW-83102)
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-35

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 608 feet

WATERTABLE: 302 feet

LOCATION: 200 East

HRS Migration Score: ENS

COORDINATES: N40180/W49175 (center of pit)

DESCRIPTION OF RELEASE:

Contaminated concrete from an underground encasement was left in the pit excavated to repair the broken pipe. This site is also known as: 218-E-13 and UN-218-E-1.

DATE OF OCCURRENCE: October, 1966

DESCRIPTION OF WASTE:

Approximately 1 Ci of fission products.

EXTENT OF CONTAMINATION:

The area is approximately 350 feet west of the PUREX exclusion area gate patrol gatehouse on 4th Street.

REMEDIAL ACTION:

The contaminated pipe was buried in place.

REFERENCES:

Documents: ARH-2757 part 4

Photographs: 122440-207-CN

Drawings: H-2-44500 Sheet #7

SITE ID NO.: UPR-200-E-36

DIMENSIONS:

Length: 900 feet
Width: 300 feet
Depth:
Area:

ELEVATION: 657 feet
WATERTABLE: 259 feet

LOCATION: 200 East
COORDINATES: N42585/W50400

HRS Migration Score: 1.252

DESCRIPTION OF RELEASE:

Two pumps removed from a cell contaminated the roadway near Semiworks while in transit.

DATE OF OCCURRENCE: July 24, 1967

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings from 30,000 to 80,000 c/m.

EXTENT OF CONTAMINATION:

Spotty road contamination occurred in the general area north of Semiworks approximately 300 yds. by 150 yds.

REMEDIAL ACTION:

The roadways were flushed with water. A program for decontamination was instated.

REFERENCES:

Documents: Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-37

DIMENSIONS:

Length: 600 feet
Width:
Depth:
Area:

ELEVATION: 689 feet
WATERTABLE: 286 feet

LOCATION: 200 East
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

On July 31, 1967, residual contamination was detected from the UN-216-E-36 incident of July 24, 1967.

DATE OF OCCURRENCE: July 31, 1967

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings to 200 mrad/hr.

EXTENT OF CONTAMINATION:

An area approximately 600 feet long to the east of Semiworks and a dirt road outside the east fence.

REMEDIAL ACTION:

Sprinklers were set in the contaminated areas and the blacktop was cleaned.

REFERENCES:

Documents: Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-38

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION:
WATERTABLE:

LOCATION: 200 East
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Leakage from the 241-B-152 diversion box contaminated an area northeast of the box.

DATE OF OCCURRENCE: January 4, 1968

DESCRIPTION OF WASTE:

Unknown beta/gamma - ground was read from 2,000 to 6,000 c/m. The blacktop area was contaminated from 20 to 30 mR/hr.

EXTENT OF CONTAMINATION:

A fan-shaped area to the northeast of the 241-B-152 diversion box.

REMEDIAL ACTION:

The area outside the 241-B tank farm was zoned off. Backfill was dumped into the hole, and spread on the contaminated area in the farm.

REFERENCES:

Documents: Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-39

DIMENSIONS:

Length: 26 feet
Width: 26 feet
Depth:
Area: 650 square feet

ELEVATION: 664 feet
WATERTABLE: 280 feet

LOCATION: 200 East
COORDINATES:

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

Pressurized ammonia scrubber waste was inadvertently released through the vent at the 216-A-36B crib sampling shack.

DATE OF OCCURRENCE: February 6, 1968

DESCRIPTION OF WASTE:

Pressurized ammonia scrubber waste containing fission products. Readings were from 20 to 450 mrad/hr.

EXTENT OF CONTAMINATION:

Approximately 650 sq. ft. of ground and blacktopped area near the 216-A-36B crib sampling shack.

REMEDIAL ACTION:

The blacktop and ground surfaces were hosed down with water.

REFERENCES:

Documents: Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-40

DIMENSIONS:

Length:

Width:

Depth:

Area: 50 square feet

ELEVATION: 664 feet

WATERTABLE: 280 feet

LOCATION: 200 East

COORDINATES:

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

The vent line valve at the 216-A-36B crib sampling shack was inadvertently left open and contaminated the blacktop outside the shack.

DATE OF OCCURRENCE: August 5, 1968

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings to a maximum of 150 mrad/hr.

EXTENT OF CONTAMINATION:

Approximately 50 square feet of blacktop outside the 216-A-36B crib sampler shack.

REMEDIAL ACTION:

Contaminated blacktop was removed.

REFERENCES:

Documents: Radiation Occurrence Report

Photographs:

Drawings:

SITE ID NO.: UPR-200-E-41

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION:
WATERTABLE:

LOCATION: 200 East
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Waste line leakage contaminated the stairwell at the 271-B Bldg.

DATE OF OCCURRENCE: July 19, 1972

DESCRIPTION OF WASTE:

An estimated 30 Ci of Cs-137 - readings of 12.5 rad/hr. including 1.5 R/hr.

EXTENT OF CONTAMINATION:

The R-13 stairwell of the 271-B Bldg.

REMEDIAL ACTION:

Approximately 1/2 of the total cesium contamination was removed during excavation, drummed and buried in the dry waste burial trench. The failed line was removed from service.

REFERENCES:

Documents: Unusual Occurrence Report #72-50
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-42

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION:
WATERTABLE:

LOCATION: 200 East
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Surveys revealed contamination thought to be the result of pressurization of a 244-AR diverter tank which was inadvertently left on.

DATE OF OCCURRENCE: November 6, 1972

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings from 300 to 3,000 c/m.

EXTENT OF CONTAMINATION:

A dirt bank east of the 151-AX diverter station and weeds east of the established parking lot.

REMEDIAL ACTION:

The area was cleaned.

REFERENCES:

Documents: Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-43

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 634 feet

WATERTABLE: 235 feet

LOCATION: 200 East

COORDINATES:

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

While in transit for burial, the 102-BY pump contaminated a section of the road from the 241-BY tank farm to the burial ground.

DATE OF OCCURRENCE: January 10, 1972

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings from 1,000 to 100,000 c/m.

EXTENT OF CONTAMINATION:

The roadway from the 241-BY tank farm to the burial ground.

REMEDIAL ACTION:

Decontamination of the affected area began immediately.

REFERENCES:

Documents: Radiation Occurrence Report

Photographs:

Drawings:

SITE ID NO.: UPR-200-E-44

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION:
WATERTABLE:

LOCATION: 200 East
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

The BCS crib line contaminated the soil from leakage south of the R-17 change house.

DATE OF OCCURRENCE: August 16, 1972

DESCRIPTION OF WASTE:

Unknown beta/gamma - dirt was contaminated from 10,000 to 20,000 c/m. The pipe was contaminated to 20 mR/hr.

EXTENT OF CONTAMINATION:

South of the R-17 change house next to 7th Street.

REMEDIAL ACTION:

The resultant cave-in was immediately barricaded and roped off as a radiation zone.

REFERENCES:

Documents: Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-45

DIMENSIONS:

Length: 300 ft.
Width: 100 ft.
Depth:
Area: 30,000 square feet

ELEVATION:
WATERTABLE:

LOCATION: 200 East
COORDINATES:

HRS Migration Score: 1.143

DESCRIPTION OF RELEASE:

A cleanup operation at the 241-B-154 diversion box inadvertently contaminated an area in the immediate vicinity.

DATE OF OCCURRENCE: August 26, 1974

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings up to 50,000 c/m.

EXTENT OF CONTAMINATION:

An area approximately 100 ft. wide by 300 ft. long running in a southeasterly direction from the 241-B-154 diversion box.

REMEDIAL ACTION:

The contaminated roadway was washed off with water and the borrow pit slopes were bladed. The contaminated soil was collected and placed in a burial trench.

REFERENCES:

Documents: Unusual Occurrence Report #74-127, Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-47

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 686 feet
WATERTABLE: 282 feet

LOCATION: 200 East
COORDINATES:

HRS Migration Score: 1.089

DESCRIPTION OF RELEASE:

Contaminated soil was detected in the 241-A tank farm.

DATE OF OCCURRENCE: October 15, 1974

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings from 500 to 20,000 c/m from the 241-A tank farm.

EXTENT OF CONTAMINATION:

The parking lot east of the 702-A Bldg.

REMEDIAL ACTION:

The contaminated soil was removed and the area released for normal service.

REFERENCES:

Documents: Unusual Occurrence Report #74-135
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-48

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION:
WATERTABLE:

LOCATION: 200 East
COORDINATES:

HRS Migration Score: 0.817

DESCRIPTION OF RELEASE:

The 214-A-106 pump pit contaminated the 241-A tank farm parking lot.

DATE OF OCCURRENCE: November 22, 1974

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings from 1,000 to 2,000 c/m.

EXTENT OF CONTAMINATION:

The 241-A tank farm parking lot.

REMEDIAL ACTION:

The parking area was cleaned and returned to normal operation by 6:45 p.m. the same day.

REFERENCES:

Documents: Unusual Occurrence Report #74-150
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-49

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION:

WATERTABLE:

LOCATION: 200 East
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

A thermocouple well being transferred to the burial ground from the 241-AY tank farm contaminated a section of the road.

DATE OF OCCURRENCE: February 7, 1975

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings from 100,000 c/m.

EXTENT OF CONTAMINATION:

The contamination was confined to the snow cover and did not reach the ground surface.

REMEDIAL ACTION:

The contaminated sections of road, immediately northwest of the 241-AY tank farm and northeast of the 241-C tank farm, were barricaded and cleanup initiated.

REFERENCES:

Documents: Unusual Occurrence Report #75-11
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-50

DIMENSIONS:

Length: 450 ft.
Width: 75 ft.
Depth:
Area:

ELEVATION: 640 feet
WATERTABLE: 245 feet

LOCATION: 200 East
COORDINATES:

HRS Migration Score: 1.143

DESCRIPTION OF RELEASE:

Wind spread contamination from an adjacent radiation zone at the 241-C tank farm.

DATE OF OCCURRENCE: September 27, 1974

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings from 3,000 to 100,000 c/m.

EXTENT OF CONTAMINATION:

An area approximately 75 ft. wide and about 450 feet long southeast of the Overground Radioactive Equipment Storage Yard north of the 241-C tank farm.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: Radiation Occurrence Report #74-10-01
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-51

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 703 feet

WATERTABLE: 295 feet

LOCATION: 200 East
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

The PUREX storage tank (TK-324). Cadmium nitrate was released from the PUREX storage tank (TK-324) to the chemical sewer (216-B-3-3) and eventually went to the 216-B-3 (B Pond).

DATE OF OCCURRENCE: May 18, 1977

DESCRIPTION OF WASTE:

Cadmium nitrate solution - maximum of 15 kg of Cadmium released.

EXTENT OF CONTAMINATION:

The 216-B-3-3 ditch (chemical sewer) and the 216-B-3 pond received the waste.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: Unusual Occurrence Report #77-72

Photographs:

Drawings:

SITE ID NO.: UPR-200-E-52

DIMENSIONS:

Length: 4 feet
Width: 4 feet
Depth: 4 feet
Area:

ELEVATION:
WATERTABLE:

LOCATION: 200 East
COORDINATES:

HRS Migration Score: 0.980

DESCRIPTION OF RELEASE:

The steam pressure valve at the E-5-2 strontium concentrator contaminated the soil in an area just below the drain.

DATE OF OCCURRENCE: August 1, 1975

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings to 20,000 c/m.

EXTENT OF CONTAMINATION:

Approximately 4 cubic feet of soil just below the drain at the 221-B Building.

REMEDIAL ACTION:

About 4 cubic feet of contaminated dirt was packaged and sent to the burial ground. The area is posted as an underground radiation zone.

REFERENCES:

Documents: Unusual Occurrence Report No. 75-84
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-53

DIMENSIONS:

Length: 150 feet
Width: 50 feet
Depth:
Area:

ELEVATION:
WATERTABLE:

LOCATION: 200 East
COORDINATES:

HRS Migration Score: 0.817

DESCRIPTION OF RELEASE:

During a burial operation contamination was spread by uncovering previously buried waste.

DATE OF OCCURRENCE: October 17, 1978

DESCRIPTION OF WASTE:

Beta/gamma - readings to 150 mrad/hr.

EXTENT OF CONTAMINATION:

An area approximately 50 ft. by 150 ft. at the south end of a waste trench in 218-E-1 (Dry Waste Burial Ground).

REMEDIAL ACTION:

The contaminated soil was reburied and clean fill dirt brought in and spread over the area.

REFERENCES:

Documents: Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-54

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION:

WATERTABLE:

LOCATION: 200 East

COORDINATES:

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

Water used to decontaminate a manipulator inside the 225-B Bldg. was spilled outside an exit door, contaminating the concrete door pad and the soil.

DATE OF OCCURRENCE: July 20, 1977

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings were 10,000 c/m and 25 mRad/hr.

EXTENT OF CONTAMINATION:

The concrete pad and adjacent soil outside an exit door at the 225-B Bldg.

REMEDIAL ACTION:

The contaminated soil was packaged for disposal. The contaminated concrete was removed and a new pad poured.

REFERENCES:

Documents: Unusual Occurrence Report #77-123

Photographs:

Drawings:

SITE ID NO.: UPR-200-E-55

DIMENSIONS:

Length: 100 feet
Width: 100 feet
Depth: 1 foot
Area:

**ELEVATION:
WATERTABLE:**

LOCATION: 200 East
COORDINATES:

HRS Migration Score: 0.835

DESCRIPTION OF RELEASE:

Wind spread contamination from an adjacent radiation zone near the 212-B Building.

DATE OF OCCURRENCE: April 27, 1979

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings from 5,000 to 30,000 c/m.

EXTENT OF CONTAMINATION:

The roadway southeast of the K-3 filter area and the gravel area southeast of the 212-B Bldg.

REMEDIAL ACTION:

The area was isolated as a temporary zone, cleaned up and released.

REFERENCES:

Documents: Unusual Occurrence Report #79-52, Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-56

DIMENSIONS:

Length: 100 feet
Width: 100 feet
Depth: 10 feet
Area:

ELEVATION:
WATERTABLE:

LOCATION: 200 East
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Contaminated soil was found during an excavation for clean soil to be used around the 241-AN tanks.

DATE OF OCCURRENCE: June 13, 1979

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings to 8,000 c/m.

EXTENT OF CONTAMINATION:

An excavation east of the 200 East area perimeter fence.

REMEDIAL ACTION:

The area was zoned off and posted.

REFERENCES:

Documents: Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-58

DIMENSIONS:

Length: 500 feet
Width: 30 feet
Depth: 1 foot
Area:

ELEVATION:
WATERTABLE:

LOCATION: 200 East
COORDINATES:

HRS Migration Score: 0.817

DESCRIPTION OF RELEASE:

Contaminated tumble weeds were detected along the roadway near the 218-E-1 (Dry Waste Burial Ground).

DATE OF OCCURRENCE: March 4, 1980

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings to 100,000 c/m.

EXTENT OF CONTAMINATION:

A dirt roadway leading to the Dry Waste Burial Ground.

REMEDIAL ACTION:

The roadway was cleaned up.

REFERENCES:

Documents: Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-59

DIMENSIONS:

Length: 1 foot
Width: 1 foot
Depth: 1 foot
Area:

ELEVATION:
WATERTABLE:

LOCATION: 200 East
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Contaminated mud and tumbleweeds from the 216-A-40 trench was used by swallows to build nests at the 244-AX vault.

DATE OF OCCURRENCE: May 23, 1979

DESCRIPTION OF WASTE:

Contaminated mud containing Cs-137 and Co-60.
Readings from 10,000 to 20,000 c/m.

EXTENT OF CONTAMINATION:

The eaves of the 244-AR vault and the walls of the 216-A-40 trench.

REMEDIAL ACTION:

The nests were removed from 244-AR vault. The tumbleweeds were removed from 216-A-40, packaged and placed in the burial ground. The sides of the 216-A-40 were washed and the contaminated mud removed.

REFERENCES:

Documents: Unusual Occurrence Report No.: 79-60
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-73

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 625 feet
WATERTABLE: 233 feet

LOCATION: 200 East
COORDINATES: N44960/W52950

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

Leakage and spills from work around the 241-B-151 diversion box.

DATE OF OCCURRENCE: 1951-1952

DESCRIPTION OF WASTE:

Fission Products - approximately 10 Ci.

EXTENT OF CONTAMINATION:

Area around the 241-B-151 diversion box.

REMEDIAL ACTION:

Most of the contamination was removed and that remaining was covered with about 1 foot of clean soil. The area was delimited with a chain fence and posted "Underground Contamination".

REFERENCES:

Documents: RHO-CD-673
Photographs:
Drawings: H-2-4450, H-2-34761

SITE ID NO.: UPR-200-E-74

DIMENSIONS:

Length:

Width:

Depth:

Area: 50 square feet

ELEVATION: 625 feet

WATERTABLE: 233 feet

LOCATION: 200 East

COORDINATES: N4500/W5300

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

Leakage from the 241-B-152 diversion box contaminated soil.

DATE OF OCCURRENCE: Spring, 1954

DESCRIPTION OF WASTE:

Fission products - approximately 1 Ci.

EXTENT OF CONTAMINATION:

An area of approximately 50 ft. square around the 24-B-152 diversion box.

REMEDIAL ACTION:

A portion of the contaminated soil was removed and the remainder covered with several inches of clean soil. The area was delimited with rope and posted with radiation zone signs.

REFERENCES:

Documents: RHO-CD-673

Photographs:

Drawings: H-2-4450

SITE ID NO.: UPR-200-E-75

DIMENSIONS:

Length: 100 ft.
Width: 50 ft.
Depth:
Area: 5000 square feet

ELEVATION: 625 feet
WATERTABLE: 233 feet

LOCATION: 200 East
COORDINATES: N45100/W52900

HRS Migration Score: 1.089

DESCRIPTION OF RELEASE:

Ground contamination resulted from work done on the 241-B-153 diversion box.

DATE OF OCCURRENCE: 1954-1955

DESCRIPTION OF WASTE:

Unplanned release of fission product waste to the ground.
Approximately 1 Ci.

EXTENT OF CONTAMINATION:

A 5000 square foot area around the 241-B-153 diversion box.

REMEDIAL ACTION:

An area approximately 50 ft. x 100 ft. is marked as a radiation zone and has been covered with clean gravel.

REFERENCES:

Documents: RHO-CD-673
Photographs:
Drawings: H-2-4450

SITE ID NO.: UPR-200-E-76

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 625 feet

WATERTABLE: 233 feet

LOCATION: 200 East

COORDINATES: N45100/W52900

HRS Migration Score: 0.980

DESCRIPTION OF RELEASE:

The soil column was contaminated from a leak in the transfer line from 9-2 tank in B Plant to the 110-B underground storage tank.

DATE OF OCCURRENCE: January, 1968

DESCRIPTION OF WASTE:

5400 gallons of solution from the 9-2 Tank in B Plant containing Ce-144 (4780 Ci), Ru-106 (340 Ci), and Zr-95Nb (850 Ci).

EXTENT OF CONTAMINATION:

Area near the 241-B-153 diversion box.

REMEDIAL ACTION:

The contaminated soil was covered with clean gravel.

REFERENCES:

Documents: RHO-CD-673

Photographs:

Drawings: H-2-44500

SITE ID NO.: UPR-200-E-77

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 625 feet

WATERTABLE: 233 feet

LOCATION: 200 East

COORDINATES: N42550/W52800

HRS Migration Score: 1.089

DESCRIPTION OF RELEASE:

Jumper leakage from the 241-B-154 diversion box.

DATE OF OCCURRENCE: 1946

DESCRIPTION OF WASTE:

Metal waste solution from 221-B. Fission products - approximately 1 Ci.

EXTENT OF CONTAMINATION:

The ground around 241-B-154 diversion box.

REMEDIAL ACTION:

The contamination was covered with 1 foot of clean soil.

REFERENCES:

Documents: RHO-CD-673

Photographs:

Drawings: H-2-44500

SITE ID NO.: UPR-200-E-78

DIMENSIONS:

Length: 200 ft
Width: 200 ft
Depth:
Area:

ELEVATION: 625 feet
WATERTABLE: 233 feet

LOCATION: 200 East
COORDINATES: N44200/W53200

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

Pressure testing of lines and jumpers in the 155-BX diversion box caused leakage resulting in ground contamination.

DATE OF OCCURRENCE: October, 1955

DESCRIPTION OF WASTE:

Mixed fission product salt waste from B-Plant. Approximately 10 Ci. Maximum dose rate of 22.6 rad/hr at the surface.

EXTENT OF CONTAMINATION:

An area approximately 200 square feet around the 241-BX-155 diversion box.

REMEDIAL ACTION:

Approximately 200 square feet of surface area was covered with clean soil.

REFERENCES:

Documents: RHO-CD-673
Photographs:
Drawings: H-2-44500

SITE ID NO.: UPR-200-E-79

DIMENSIONS:

Length: 100 feet
Width: 50 feet
Depth: 1 foot
Area:

ELEVATION: 625 feet
WATERTABLE: 233 feet

LOCATION: 200 East
COORDINATES: N44950/W52600

HRS Migration Score: 1.198

DESCRIPTION OF RELEASE:

Five leaks were discovered in the waste line from 242-B to 207-B retention basin.

DATE OF OCCURRENCE: June, 1953

DESCRIPTION OF WASTE:

Fission products - approximately 10 Ci.

EXTENT OF CONTAMINATION:

Minor leakage in five areas between the 242-B and 207-B retention basins.

REMEDIAL ACTION:

The contaminated area was covered with 2 inches of clean soil. No signs mark the area.

REFERENCES:

Documents: RHO-CD-673
Photographs:
Drawings: H-2-44500

SITE ID NO.: UPR-200-E-80

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 686 feet
WATERTABLE: 282 feet

LOCATION: 200 East
COORDINATES: N42575/W53450

HRS Migration Score: 1.198

DESCRIPTION OF RELEASE:

Leakage from the R-3 waste line.

DATE OF OCCURRENCE: June 17, 1946

DESCRIPTION OF WASTE:

Fission products - approximately 10 Ci.

EXTENT OF CONTAMINATION:

An area approximately 100 ft. x 500 ft. long south of the 221-B Bldg.

REMEDIAL ACTION:

During subsequent construction activity, the major portion of the contaminated soil was removed to the 200-E Waste Burial Ground. The area has been covered with several feet of gravel.

REFERENCES:

Documents: RHO-CD-673
Photographs:
Drawings: H-2-44500

SITE ID NO.: UPR-200-E-81

DIMENSIONS:

Length:

Width:

Depth:

Area: 240 square feet

ELEVATION: 683 feet

WATERTABLE: 279 feet

LOCATION: 200 East

COORDINATES: N42600/W48460

HRS Migration Score: 1.198

DESCRIPTION OF RELEASE:

A leak in the liquid radioactive waste transfer line from Purex 202-A Bldg to the 102-C waste storage tank.

DATE OF OCCURRENCE: October, 1969

DESCRIPTION OF WASTE:

Approximately 36,000 gallons of waste was lost to the soil which included: Sr-90 (360 Ci), Cs-137 (720 Ci), Ce-144 (360 Ci), Zr-95Nb (1080 Ci), and Ru-103 (1080 Ci).

EXTENT OF CONTAMINATION:

An area near the 241-CR-151 diversion box.

REMEDIAL ACTION:

Contamination was covered with clean gravel.

REFERENCES:

Documents: RHO-CD-673

Photographs:

Drawings: H-2-44500

SITE ID NO.: UPR-200-E-82

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 683 feet
WATERTABLE: 279 feet

LOCATION: 200 East
COORDINATES: N42850/W48750

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

Leak in the liquid radioactive waste transfer line from B Plant to the 105-C Tank.

DATE OF OCCURRENCE: December 19, 1969

DESCRIPTION OF WASTE:

Approximately 2600 gal of waste containing Cs-134 (100 Ci), Cs-137 (11,300 Ci), Ce-144 (260 Ci), Zr-95Nb (260 Ci), and Ru-106 (130 Ci).

EXTENT OF CONTAMINATION:

An area near the 241-C-152 diversion box.

REMEDIAL ACTION:

The contaminated soil was covered with clean gravel.

REFERENCES:

Documents: RHO-CD-673, ARH-2757 part 4, ARH-1945
Photographs:
Drawings: H-2-44500

SITE ID NO.: UPR-200-E-83

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 740 feet

WATERTABLE: 335 feet

LOCATION: 200 East

COORDINATES:

HRS Migration Score: 0.726

DESCRIPTION OF RELEASE:

Radioactive feces from coyotes and rabbits contact is believed to have occurred in residue salts in the bottom of BC liquid-waste trenches.

DATE OF OCCURRENCE: May, 1958

DESCRIPTION OF WASTE:

Sr-90 (.5 Ci) and Cs-137 (.5 Ci) which is remaining fixed in rabbit droppings.

EXTENT OF CONTAMINATION:

BC cribs outer area.

REMEDIAL ACTION:

Monthly and quarterly surveillance reports indicate the contamination to be fixed beneath a good growth of vegetation. There is no significant evidence of resuspension of the radioactive particulate matter.

Additional corrective action may have been provided.

REFERENCES:

Documents: ARH-2757, ARH-3088

Photographs:

Drawings:

SITE ID NO.: UPR-200-E-84

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 697 feet
WATERTABLE: 293 feet

LOCATION: 200 East
COORDINATES: W41937/W54702

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

About 1700 gallons of contaminated acid was discharged to the ground due to a leak in 241-ER-151 diversion box.

DATE OF OCCURRENCE: March, 1953

DESCRIPTION OF WASTE:

1700 gallons of contaminated acid with approximately 10 Ci of fission products.

EXTENT OF CONTAMINATION:

An area approximately 800 ft southwest of the 221-B Bldg near the 241-ER-151 diversion box.

REMEDIAL ACTION:

No ground contamination was detected.

REFERENCES:

Documents: RHO-CD-673
Photographs:
Drawings: H-2-44500

SITE ID NO.: UPR-200-E-85

DIMENSIONS:

Length: 50 feet
Width: 50 feet
Depth: 15 feet
Area:

ELEVATION: 700 feet
WATERTABLE: 298 feet

LOCATION: 200 East
COORDINATES: N42500/W53850

HRS Migration Score: 1.143

DESCRIPTION OF RELEASE:

Transfer line leakage from the 18-1 tank (221-B Bldg) to the 154 BX diversion box contaminated an area near the R-13 utility pit.

DATE OF OCCURRENCE: July 20, 1972

DESCRIPTION OF WASTE:

Cs-137 - containing approximately 15 Ci Cs-137. Radiation measurements at the bottom of the pit read 15 rad/hr at 2 inches from the source.

EXTENT OF CONTAMINATION:

Near R-13 utility pit at the 221-B Bldg.

REMEDIAL ACTION:

Area was zoned off and excavation started to try and locate the leak.

REFERENCES:

Documents: Radiation Occurrence Report
Photographs:
Drawings: H-2-4450

SITE ID NO.: UPR-200-E-86

DIMENSIONS:

Length:

Width:

Depth: 20 feet

Area:

ELEVATION: 680 feet

WATERTABLE: 278 feet

LOCATION: 200 East
COORDINATES: N52725/W48745

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

A leak in the process transfer line No. 812 from AR vault to 241-C tank farm provided contamination to the soil.

DATE OF OCCURRENCE: February 25, 1971

DESCRIPTION OF WASTE:

Waste from the process transfer line containing 25,000 Ci Cs-137.

EXTENT OF CONTAMINATION:

An area near the southwest corner of the 241-C Tank Farm. Contaminated soil volume estimated at 1300 cubic feet.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: RHO-CD-67

Photographs:

Drawings: H-2-44500

SITE ID NO.: UPR-200-E-87

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 690 feet
WATERTABLE: 286 feet

LOCATION: 200 East
COORDINATES: N42325/W53980

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

Plutonium ground contamination.

DATE OF OCCURRENCE: 1945 through 1953

DESCRIPTION OF WASTE:

Approximately 75 grams of Pu-239.

EXTENT OF CONTAMINATION:

South side of 224-B Building.

REMEDIAL ACTION:

No mention of any action concerning cleanup.

REFERENCES:

Documents: RHO-CD-673
Photographs:
Drawings: H-2-44500

SITE ID NO.: UPR-200-E-89

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION:
WATERTABLE:

LOCATION: 200 East
COORDINATES:

HRS Migration Score: 1.361

DESCRIPTION OF RELEASE:

Ground contamination was discovered at the 241-BX tank farm probably due to tank leakage.

DATE OF OCCURRENCE: 1978

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings from 500 to 2,000 c/m.

EXTENT OF CONTAMINATION:

East side of the 241-BX tank farm along Baltimore Ave.

REMEDIAL ACTION:

The affected area was zoned off against casual entry and later established as an unplanned release site in September of 1980.

REFERENCES:

Documents: Rockwell Radiation Survey Report Completed September, 1981
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-91

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION:
WATERTABLE:

LOCATION: 200 East
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Contaminated soil was detected in the corner of the 241-C tank farm probably due to tank leakage.

DATE OF OCCURRENCE: Unknown

DESCRIPTION OF WASTE:

Not identified in reference.

EXTENT OF CONTAMINATION:

Around the northeast corner of the 241-C tank farm.

REMEDIAL ACTION:

The contaminated soil was removed and placed in the excavation north of 216-A-24. The area was seeded with drought resistant grasses and it has been removed from zone posting.

REFERENCES:

Documents: Rockwell Radiation Survey Report Completed September, 1981
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-92

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION:
WATERTABLE:

LOCATION: 200 East
COORDINATES: N43850/W47250

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Contaminated Russian Thistles were found outside the 200 East Area Burial Ground.

DATE OF OCCURRENCE: Unknown

DESCRIPTION OF WASTE:

Sr and Cs.

EXTENT OF CONTAMINATION:

Outside and adjacent to the 200 East Area perimeter fence, adjacent to 216-E-21.

REMEDIAL ACTION:

The contaminated sand was removed from the bottom of the fence and buried in the excavation pit north of 216-A-24 during the spring of 1981. The site was released from zone posting.

REFERENCES:

Documents: Rockwell Radiation Survey Report Completed September, 1981
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-94

DIMENSIONS:

Length: 100 feet
Width: 30 feet
Depth: 3 feet
Area:

ELEVATION:

WATERTABLE:

LOCATION: 200 East
COORDINATES:

HRS Migration Score: 0.980

DESCRIPTION OF RELEASE:

Earth moving equipment had to be decontaminated. A gravel pit northeast of the 241-C tank farm was used to contain the waste solution.

DATE OF OCCURRENCE: June, 1979

DESCRIPTION OF WASTE:

Unknown beta/gamma - maximum reading of 8,000 c/m.

EXTENT OF CONTAMINATION:

Due north of 216-B-3-1 ditch and 1600 ft. northeast of the 241-C tank farm.

REMEDIAL ACTION:

The gravel pit was established as an unplanned release site.

REFERENCES:

Documents: Rockwell Radiation Survey Report Completed September, 1981
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-95

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 676 feet
WATERTABLE: 270 feet

LOCATION: 200 East
COORDINATES:

HRS Migration Score: 0.726

DESCRIPTION OF RELEASE:

Contamination was spread by equipment on railroad cars enroute to the burial ground from B-Plant and PUREX operations.

DATE OF OCCURRENCE: Unknown

DESCRIPTION OF WASTE:

Unknown beta/gamma - maximum reading of 100,000 c/m.

EXTENT OF CONTAMINATION:

Railroad spur between the 218-E-2A and 218-E-5 Burial Grounds.

REMEDIAL ACTION:

The area was established as an unplanned release site in September of 1980.

REFERENCES:

Documents: Rockwell Radiation Survey Report Completed September, 1981
Photographs:
Drawings: H-2-34761

SITE ID NO.: UPR-200-E-96

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION:

WATERTABLE:

LOCATION: 200 East

HRS Migration Score: ENS

COORDINATES:

DESCRIPTION OF RELEASE:

Contamination was spread during work at the 291-A stack and diversion box.

DATE OF OCCURRENCE: Unknown

DESCRIPTION OF WASTE:

Not identified in reference.

EXTENT OF CONTAMINATION:

An area from the south side of the 202-A Bldg. to the southern fence.

REMEDIAL ACTION:

Surface contamination, debris, and vegetation were removed and the area was covered with 4 to 6 inches of 5/8 inch crushed gravel. The site was removed from zone posting and established as an unplanned release site in September of 1980.

REFERENCES:

Documents: Rockwell Radiation Survey Report

Photographs:

Drawings: H-2-34761

SITE ID NO.: UPR-200-E-97

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION:

WATERTABLE:

LOCATION: 200 East

HRS Migration Score: ENS

COORDINATES:

DESCRIPTION OF RELEASE:

Ground contamination was detected south of PUREX near the railroad tunnel from an unknown source.

DATE OF OCCURRENCE: Unknown

DESCRIPTION OF WASTE:

Not identified in reference.

EXTENT OF CONTAMINATION:

South of the 202-A Bldg. near the railroad tunnel.

REMEDIAL ACTION:

Apparently the surface contamination was removed and the zone eliminated when the double-exclusion fence was built around the 202-A Bldg. The area was released from zone posting and established as an unplanned release site in September of 1980.

REFERENCES:

Documents: Rockwell Radiation Survey Report Completed September, 1981

Photographs:

Drawings:

SITE ID NO.: UPR-200-E-98

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION:
WATERTABLE:

LOCATION: 200 East
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

The 291-C stack discharged some contaminated material which was detected around the base of the stack near the 216-C-2 reverse well.

DATE OF OCCURRENCE: Unknown

DESCRIPTION OF WASTE:

Primarily Sr-90.

EXTENT OF CONTAMINATION:

The east side of C Plant near the base of the 291-C stack and around the 216-C-2 reverse well.

REMEDIAL ACTION:

The area was released from zone posting; however, residual contamination still remains at the site.

REFERENCES:

Documents: Rockwell Radiation Survey Report Completed September, 1981
Photographs:
Drawings: H-2-34761

SITE ID NO.: UPR-200-E-99

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION:
WATERTABLE:

LOCATION: 200 East
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Ground contamination was detected near the 244-CR vault from an unknown source.

DATE OF OCCURRENCE: Unknown

DESCRIPTION OF WASTE:

Not identified in reference.

EXTENT OF CONTAMINATION:

Approximately 400 ft. south of the 241-C tank farm near the 244-CR vault.

REMEDIAL ACTION:

The area was decontaminated in the summer of 1981 and released from zone posting.

REFERENCES:

Documents: Rockwell Radiation Survey Report Completed September, 1981
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-103

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION:
WATERTABLE:

LOCATION: 200 East
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

The BCS Crib line contaminated the soil from leakage south of the R-17 change house.

DATE OF OCCURRENCE: March 8, 1972

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings to 1,500 c/m.

EXTENT OF CONTAMINATION:

South of the R-17 change house next to 7th St.

REMEDIAL ACTION:

The hole in the line was sealed with a filter and the area was barricaded as a radiation zone.

REFERENCES:

Documents: Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-105

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION:
WATERTABLE:

LOCATION: 200 East
COORDINATES:

HRS Migration Score: 1.143

DESCRIPTION OF RELEASE:

Liquid leaked from the 107-BY manifold header at the 107-BY tank farm.

DATE OF OCCURRENCE: December 15, 1952

DESCRIPTION OF WASTE:

23,000 gallons of first cycle waste.

EXTENT OF CONTAMINATION:

The ground surface received about 23,000 gallons covering an area of approximately 300 square feet. The exposure rate was measured at 715 rep/hr.

REMEDIAL ACTION:

The pump was turned off. The contaminated area was covered with concrete after evaluation.

REFERENCES:

Documents: HW-26653
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-106

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION:
WATERTABLE:

LOCATION: 200 East
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Considerable contamination has been found at the burning ground.

DATE OF OCCURRENCE: September 5, 1946

DESCRIPTION OF WASTE:

Contaminated paper towels.

EXTENT OF CONTAMINATION:

The radiation level was measured as high as 2.5 rep/hr.

REMEDIAL ACTION:

Proper waste disposal was emphasized to personnel.

REFERENCES:

Documents: Special Hazards Incident Investigation #31
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-107

DIMENSIONS:

Length: 20 feet

Width:

Depth:

Area:

ELEVATION:

WATERTABLE:

LOCATION: 200 East

COORDINATES:

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

Contamination spread to ground and equipment during a transfer pump installation in the 100-CR tank in the 241-CR tank farm.

DATE OF OCCURRENCE: November 26, 1952

DESCRIPTION OF WASTE:

TBP waste from 221-U Building.

EXTENT OF CONTAMINATION:

Approximately five gallons of liquid was discharged before the pump could be shut off. A maximum dose rate of 4.2 rep/hr at the surface including 200 mr/hr at two inches was observed on ground contamination.

REMEDIAL ACTION:

Unknown.

REFERENCES:

Documents: HW-27627

Photographs:

Drawings:

SITE ID NO.: UPR-200-E-108

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION:

WATERTABLE:

LOCATION: 200 East
COORDINATES:

HRS Migration Score: 1.143

DESCRIPTION OF RELEASE:

Contamination spread to the 102-B heel pit and surrounding ground area, 241-B tank farm during supernatant pumping from the 102-B tank to the 101-B tank.

DATE OF OCCURRENCE: April 14, 1953

DESCRIPTION OF WASTE:

Metal waste supernatant.

EXTENT OF CONTAMINATION:

There was visible ground contamination up to 10 rep/hr on the surface around the 102-B heel pit and instrument shelter.

REMEDIAL ACTION:

The contaminated ground area where dose rate radiation levels were present was stabilized with asphalt immediately.

REFERENCES:

Documents: HW-27914, HW-29957
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-109

DIMENSIONS:

Length:

Width:

Depth:

Area: 300 square feet

ELEVATION: 644 feet

WATERTABLE: 241 feet

LOCATION: 200 East

HRS Migration Score: 1.035

COORDINATES:

DESCRIPTION OF RELEASE:

Ground contamination with TBP waste at the 241-B Tank Farm.

DATE OF OCCURRENCE: November 11, 1953

DESCRIPTION OF WASTE:

TBP waste.

EXTENT OF CONTAMINATION:

Approximately 300 square feet around the jammed riser was contaminated. Exposure rates of 18 rep/hr at 6 inches and 100 mr/hr at 30 feet were reported.

REMEDIAL ACTION:

The area was roped off and restricted. It was stabilized with asphalt.

REFERENCES:

Documents: HW-30005, HW-30025

Photographs:

Drawings:

SITE ID NO.: UPR-200-E-110

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 634 feet

WATERTABLE: 235 feet

LOCATION: 200 East

COORDINATES: N46045/E53425

HRS Migration Score: 1.143

DESCRIPTION OF RELEASE:

Several employees potentially overexposed as a result of the approaching of an undiscovered spread of process waste at the 241-BY tank farm.

DATE OF OCCURRENCE: August 7, 1955

DESCRIPTION OF WASTE:

First cycle waste from 112 tank.

EXTENT OF CONTAMINATION:

A crescent shaped ground area of approximately 25000 square feet around the 112-BY pit contaminated to 22 rads/hr. A firehose and 2 workers' gloves received contamination.

REMEDIAL ACTION:

Unknown.

REFERENCES:

Documents: HW-39007

Photographs:

Drawings:

SITE ID NO.: UPR-200-E-111

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION:
WATERTABLE:

LOCATION: 200 East
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Employee picked up contamination from wet soil in pit.

DATE OF OCCURRENCE: February 20, 1980

DESCRIPTION OF WASTE:

Mixed fission products (Cs-137 and Sr-90).

EXTENT OF CONTAMINATION:

A pit in the 200 East tank farm.

REMEDIAL ACTION:

No mention of any remedial action was made in the report.

REFERENCES:

Documents: Rockwell Radiation Telephone Report No. 2785
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-112

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 681 feet

WATERTABLE: 277 feet

LOCATION: 200 East

COORDINATES: N44300/W54550

HRS Migration Score: 0.817

DESCRIPTION OF RELEASE:

While enroute for burial, a failed cesium ion exchange column contaminated a section of the railroad track.

DATE OF OCCURRENCE: February 12, 1979

DESCRIPTION OF WASTE:

Beta/gamma - readings to 80,000 c/m.

EXTENT OF CONTAMINATION:

The railroad track from the 221-B Bldg. to the 200 East Area Burial Ground.

REMEDIAL ACTION:

The contaminated section of track and the Atlanta Ave. crossing were cleaned by noon, February 12, 1979.

REFERENCES:

Documents: Occurrence Report No. 19-24

Photographs:

Drawings:

SITE ID NO.: UPR-200-E-114

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 708 feet
WATERTABLE: 305 feet

LOCATION: 200 East
COORDINATES: N39930/W48470

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

Employee had been working in an area where contamination was found.

DATE OF OCCURRENCE: March 12, 1974

DESCRIPTION OF WASTE:

Readings to 8000 c/m beta and 1000 c/m alpha were detected on the employee.

EXTENT OF CONTAMINATION:

Valve pit outside the 202-A Building.

REMEDIAL ACTION:

Employee was decontaminated, however no mention of any action concerning cleanup to the environment.

REFERENCES:

Documents: ARHCO Radiation Incident Telephone Report No. 2394
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-115

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 664 feet
WATERTABLE: 280 feet

LOCATION: 200 East
COORDINATES: N41632/W47500

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

During bleeding of air from a line, air flowed up (instead of down) causing contaminated liquid to spray on 2 employees and the ground in an area within the 241-AX tank farm.

DATE OF OCCURRENCE: February 12, 1974

DESCRIPTION OF WASTE:

Beta/gamma. Readings to 2000 mrad/hr.

EXTENT OF CONTAMINATION:

Ground adjacent to AX-103 pump pit.

REMEDIAL ACTION:

No mention of any action concerning cleanup.

REFERENCES:

Documents: ARCHO Radiation Incident Telephone Report No: 2386
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-116

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 634 feet

WATERTABLE: 235 feet

LOCATION: 200 East
COORDINATES: N46000/W53450

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Contamination sprayed employee and surroundings while backflushing 112-BY pump.

DATE OF OCCURRENCE: November 20, 1972

DESCRIPTION OF WASTE:

Caustic flush water containing Cs-137, Y-90 and Sr-89, 90. Readings to 3 Rad/hr at 6 inches on west side.

EXTENT OF CONTAMINATION:

Mostly on employee. Amount to environment unknown.

REMEDIAL ACTION:

Area immediately covered with dirt.

REFERENCES:

Documents: ARH-2666

Photographs:

Drawings:

SITE ID NO.: UPR-200-E-117

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 713 feet
WATERTABLE: 314 feet

LOCATION: 200 East
COORDINATES: N38695/W48665

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

An excavation exposed liquid spurting up out of ground in the 200 East/PUREX Area.

DATE OF OCCURRENCE: April 20, 1972

DESCRIPTION OF WASTE:

Cs and Sr. Up to 2000 mrad/hr including 500 mR/hr at 1 foot from liquid.

EXTENT OF CONTAMINATION:

An area within a few inches of the top of waste encasement on the west side of the PUREX railroad tunnel.

REMEDIAL ACTION:

Floor of caisson was covered with plastic sheet.

REFERENCES:

Documents: ARHCO Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-118

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 657 feet
WATERTABLE: 259 feet

LOCATION: 200 East
COORDINATES: N43000/W48300

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

The 107-C effluent tank released airborne contamination in the 200 East area.

DATE OF OCCURRENCE: April 20, 1957

DESCRIPTION OF WASTE:

Readings to 3000 c/m. Highest dose rate from a particle estimated at 50 mrad/hr at the surface, with one particle deposited per square foot.

EXTENT OF CONTAMINATION:

Inside the fence: 100 yards to the south of the badgehouse and 300 yards to the north of it. Outside the fence: to the south bank of the parking lot.

REMEDIAL ACTION:

No mention of any action concerning cleanup.

REFERENCES:

Documents: BNW Radiation Occurrence Report No. 57-0-38
Photographs:
Drawings:

SITE ID NO.: UPR-200-E-119

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 664 feet

WATERTABLE: 280 feet

LOCATION: 200 East

COORDINATES: N41600/W47500

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

Employee mistakenly pulled approximately 15 feet of a contaminated electrode cable out of tank AX-104 and set it on the ground. He then removed his contaminated gloves and set them on the ground.

DATE OF OCCURRENCE: December 22, 1969

DESCRIPTION OF WASTE:

High level.

EXTENT OF CONTAMINATION:

Small area near tank AX-104, employee, and change house.

REMEDIAL ACTION:

No mention of any remedial action was addressed in the report.

REFERENCES:

Documents: ARH-1482

Photographs:

Drawings:

SITE ID NO.: UPR-200-E-120

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION:
WATERTABLE:

LOCATION: 200 East
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Fire in the plutonium extraction column spread contamination in the vicinity of 233-S Bldg.

DATE OF OCCURRENCE: November 6, 1963

DESCRIPTION OF WASTE:

Plutonium.

EXTENT OF CONTAMINATION:

An area in the immediate vicinity of the 233-S Bldg.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: HW-84619
Photographs:
Drawings:

200-WEST AREA UNPLANNED-RELEASE SITES

The following sites are included in this section.

200-West Area

UPR-200-W-2	UPR-200-W-44	UPR-200-W-95
UPR-200-W-3	UPR-200-W-45	UPR-200-W-96
UPR-200-W-4	UPR-200-W-46	UPR-200-W-97
UPR-200-W-5	UPR-200-W-47	UPR-200-W-98
UPR-200-W-6	UPR-200-W-48	UPR-200-W-99
UPR-200-W-7	UPR-200-W-49	UPR-200-W-100
UPR-200-W-8	UPR-200-W-50	UPR-200-W-101
UPR-200-W-10	UPR-200-W-51	UPR-200-W-102
UPR-200-W-11	UPR-200-W-52	UPR-200-W-103
UPR-200-W-12	UPR-200-W-53	UPR-200-W-104
UPR-200-W-13	UPR-200-W-55	UPR-200-W-105
UPR-200-W-14	UPR-200-W-56	UPR-200-W-106
UPR-200-W-15	UPR-200-W-57	UPR-200-W-107
UPR-200-W-16	UPR-200-W-58	UPR-200-W-108
UPR-200-W-17	UPR-200-W-59	UPR-200-W-109
UPR-200-W-18	UPR-200-W-60	UPR-200-W-110
UPR-200-W-19	UPR-200-W-61	UPR-200-W-111
UPR-200-W-20	UPR-200-W-62	UPR-200-W-112
UPR-200-W-21	UPR-200-W-63	UPR-200-W-113
UPR-200-W-22	UPR-200-W-64	UPR-200-W-114
UPR-200-W-23	UPR-200-W-65	UPR-200-W-116
UPR-200-W-24	UPR-200-W-66	UPR-200-W-117
UPR-200-W-26	UPR-200-W-67	UPR-200-W-118
UPR-200-W-27	UPR-200-W-68	UPR-200-W-123
UPR-200-W-28	UPR-200-W-69	UPR-200-W-124
UPR-200-W-29	UPR-200-W-70	UPR-200-W-125
UPR-200-W-30	UPR-200-W-71	UPR-200-W-126
UPR-200-W-32	UPR-200-W-72	UPR-200-W-127
UPR-200-W-33	UPR-200-W-73	UPR-200-W-128
UPR-200-W-34	UPR-200-W-74	UPR-200-W-129
UPR-200-W-35	UPR-200-W-75	UPR-200-W-130
UPR-200-W-36	UPR-200-W-76	UPR-200-W-131
UPR-200-W-37	UPR-200-W-77	UPR-200-W-132
UPR-200-W-38	UPR-200-W-78	UPR-200-W-133
UPR-200-W-39	UPR-200-W-79	UPR-200-W-134
UPR-200-W-40	UPR-200-W-80	UPR-200-W-135
UPR-200-W-41	UPR-200-W-81	UPR-200-W-137
UPR-200-W-42	UPR-200-W-82	UPR-200-W-138
UPR-200-W-43	UPR-200-W-84	UPR-200-W-139

SITE ID NO.: UPR-200-W-2

DIMENSIONS:

Length:

Width:

Depth: 11 ft.

Area:

ELEVATION: 718 feet

WATERTABLE: 258 feet

LOCATION: 200 West
COORDINATES: N43880/W73200

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

A waste line failed and discharged to the ground.

DATE OF OCCURRENCE: 1947

DESCRIPTION OF WASTE:

Not identified in reference.

EXTENT OF CONTAMINATION:

An area near T-Plant. The contamination was measured to a depth of 10-11 feet below the surface.

REMEDIAL ACTION:

A spare waste line was placed in service.

REFERENCES:

Documents: ARH-780 (ref. to HW-7096)

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-3

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 703 feet
WATERTABLE: 247 feet

LOCATION: 200 West
COORDINATES: N44680/W74298

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Contaminated equipment being hauled to the 200 West Burial Ground from T Plant contaminated an area near the railroad.

DATE OF OCCURRENCE: 1949

DESCRIPTION OF WASTE:

Not specified in reference.

EXTENT OF CONTAMINATION:

The T Plant railroad cut.

REMEDIAL ACTION:

The contamination was covered with about 10 inches of clean gravel in the spring of 1950.

REFERENCES:

Documents: HW-60807
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-4

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 703 feet
WATERTABLE: 207 feet

LOCATION: 200 West
COORDINATES: N44680/W74298

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Contamination spread from a burial box in transit.

DATE OF OCCURRENCE: 1949

DESCRIPTION OF WASTE:

Unknown beta/gamma. Readings average 7 mrep/hr.

EXTENT OF CONTAMINATION:

An area from T Plant to the heavy equipment burial ground.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: ARH-780 (ref. to HW-13190)
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-5

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 690 feet

WATERTABLE: 199 feet

LOCATION: 200 West
COORDINATES: N41425/W74900

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Overflow from the 241-TX-155 diversion box contaminated the soil.

DATE OF OCCURRENCE: 1950

DESCRIPTION OF WASTE:

Not identified in reference.

EXTENT OF CONTAMINATION:

A hillside to the west of 216-T-20.

REMEDIAL ACTION:

The area was removed from radiation zone status in December of 1970.

REFERENCES:

Documents: ARH-2105 part 4 and ARH-2757 part 4

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-6

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 668 feet

WATERTABLE: 190 feet

LOCATION: 200 West
COORDINATES: N37900/W75470

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Work done at the 241-U-151 and 152 diversion boxes provided some contamination in that area.

DATE OF OCCURRENCE: Spring, 1950

DESCRIPTION OF WASTE:

Unknown beta/gamma. Maximum dose rate of 20 mrad/hr at the surface.

EXTENT OF CONTAMINATION:

The ground around the 241-U-151 & 152 diversion boxes.

REMEDIAL ACTION:

The contamination was covered with a foot of clean soil. The area was delimited with rope and posted with radiation zone signs.

REFERENCES:

Documents: HW-60807

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-7

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 669 feet
WATERTABLE: 220 feet

LOCATION: 200 West
COORDINATES: N43350/W75250

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Work done at the 241-T-151 and 241-T-152 diversion boxes provided some contamination in that area.

DATE OF OCCURRENCE: Spring, 1950

DESCRIPTION OF WASTE:

Not specified in reference.

EXTENT OF CONTAMINATION:

An unspecified area around the 241-T-151 and 241-T-152 diversion boxes.

REMEDIAL ACTION:

A portion of the contamination was removed and the balance covered with about a foot of clean soil. The area was delimited with rope and posted with radiation zone signs.

REFERENCES:

Documents: HW-60807
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-8

DIMENSIONS:

Length:

Width:

Depth:

Area: 150 square feet

ELEVATION: 705 feet

WATERTABLE: 232 feet

LOCATION: 200 West

COORDINATES: N42500/W73350

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

Spotty contamination was detected from an unknown source in the old burning ground.

DATE OF OCCURRENCE: 1950

DESCRIPTION OF WASTE:

Fission products. Approximately 1 Ci, maximum dose rate of 45 rad/hr at the surface.

EXTENT OF CONTAMINATION:

A 150 sq. ft area in the old burning ground approximately 1500 ft. east of the 221-U Building.

REMEDIAL ACTION:

The contaminated area was covered with 10 ft. of soil. The area was removed from radiation zone status in August of 1972.

REFERENCES:

Documents: ARH-2015 part 4 and ARH-2757 part 4

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-10

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 663 feet
WATERTABLE: 192 feet

LOCATION: 200 West
COORDINATES: N35500/W75870

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Spotty contamination was detected from an unknown source.

DATE OF OCCURRENCE: Summer 1952

DESCRIPTION OF WASTE:

Uranium - maximum reading of 10,000 c/m at 1 inch.

EXTENT OF CONTAMINATION:

An area around the 203-S uranium storage tanks.

REMEDIAL ACTION:

The contaminated area was covered with asphalt and posted with radiation zone signs.

REFERENCES:

Documents: HW-60807
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-11

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 676 feet
WATERTABLE: 195 feet

LOCATION: 200 West
COORDINATES: N40160/W77009

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

A fire in the 200 West Burial Garden spread contamination in the vicinity of Z Plant.

DATE OF OCCURRENCE: 1952

DESCRIPTION OF WASTE:

Plutonium.

EXTENT OF CONTAMINATION:

An area in the vicinity of Z Plant.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: ARH-780 (ref. to HW-25227)
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-12

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 668 feet

WATERTABLE: 195 feet

LOCATION: 200 West

COORDINATES: N42335/W75745

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

An open riser from a waste evaporator discharged to the ground.

DATE OF OCCURRENCE: Spring, 1951

DESCRIPTION OF WASTE:

Unknown beta/gamma. Maximum dose rate of 2 rad/hr at 2 inches.

EXTENT OF CONTAMINATION:

The ground around an open riser on the south side of the 242-T Bldg.

REMEDIAL ACTION:

A portion of the contamination was removed and the balance covered with a foot of clean soil.

REFERENCES:

Documents: HW-60807

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-13

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 663 feet

WATERTABLE: 192 feet

LOCATION: 200 West
COORDINATES: N34380/W75225

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

The H-4 oxidizer coil failed at REDOX.

DATE OF OCCURRENCE: December 23, 1952

DESCRIPTION OF WASTE:

Unknown beta/gamma. Dose rate increased from 6 mrep/hr to 700 mrep/hr over a 3-day period.

EXTENT OF CONTAMINATION:

207-S retention basin and the swamp outside the 200 West Area.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: ARH-780 (ref. to HW-26376)

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-14

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 672 feet
WATERTABLE: 200 feet

LOCATION: 200 West
COORDINATES: N42910/W75310

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

A leak in the waste line from 242-T Bldg. to 207-T retention basin.

DATE OF OCCURRENCE: October, 1952

DESCRIPTION OF WASTE:

Not identified in reference.

EXTENT OF CONTAMINATION:

An area above the waste line between the 242-T Bldg and the 207-T retention basin.

REMEDIAL ACTION:

The leak in the line was repaired and the contaminated areas were covered with about a foot of clean soil and gravel.

REFERENCES:

Documents: HW-60807
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-15

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 663 feet

WATERTABLE: 192 feet

LOCATION: 200 West
COORDINATES: N34380/W75225

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

A steam coil failed in the REDOX D-12 waste concentrator.

DATE OF OCCURRENCE: November, 1952

DESCRIPTION OF WASTE:

Unknown beta/gamma. Dose rates were up to 2 rem/hr, including 35 mr/hr at 1 inch from the ground.

EXTENT OF CONTAMINATION:

The 207-S retention basin and the swamp area outside the 200 West Area.

REMEDIAL ACTION:

The swamp was diked to maintain a constant water level.

REFERENCES:

Documents: ARH-780 (ref. to HW-26047)

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-16

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 684 feet

WATERTABLE: 210 feet

LOCATION: 200 West
COORDINATES: N42700/W77600

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

A fire in the Dry Waste Burial Ground spread contamination outside the trench.

DATE OF OCCURRENCE: July 9, 1952

DESCRIPTION OF WASTE:

Pu. Maximum readings were 200,000 d/m inside the burial ground and 30,000 d/m outside the burial ground.

EXTENT OF CONTAMINATION:

An area in the burial ground and to the east and west of the burial trench.

REMEDIAL ACTION:

The contaminated soil on the south side of the trench was bulldozed into the trench. The ground on the north side was stabilized with road oil and nearby roads were washed down with water to remove spotty contamination.

REFERENCES:

Documents: HW-54636 and Summary of CPD and Environmental Activities

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-17

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 672 feet
WATERTABLE: 195 feet

LOCATION: 200 West
COORDINATES: N42100/W75750

HRS Migration Score: 1.180

DESCRIPTION OF RELEASE:

Contamination spread to the 241-TX tank farm and adjacent major construction area during the transfer of a temporary process waste pump from the 106-TX tank to the 114-TX tank.

DATE OF OCCURRENCE: September 11, 1952

DESCRIPTION OF WASTE:

Ce, Cs, Nb, Ru, Sr, and Zr. Readings to 2,000 c/m with a maximum of 35,000 c/m.

EXTENT OF CONTAMINATION:

A major construction zone south of the 241-TX tank farm.

REMEDIAL ACTION:

Some of the highly contaminated areas were stabilized with emulsified asphalt. There is no mention of any action taken concerning a 600 ft. long by 300 ft. wide area south of the tank riser.

REFERENCES:

Documents: Summary of CPD and Environmental Activities
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-18

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 648 feet

WATERTABLE: 182 feet

LOCATION: 200 West

HRS Migration Score: ENS

COORDINATES: N35810/W78010 (Head), N32590/W78066 (End)

DESCRIPTION OF RELEASE:

Contamination in the 216-U-9 ditch was detected from an unknown source.

DATE OF OCCURRENCE: September, 1953

DESCRIPTION OF WASTE:

Not identified in reference.

EXTENT OF CONTAMINATION:

The 216-U-9 ditch.

REMEDIAL ACTION:

Ditch was covered in the spring of 1954 and posted with "UNDERGROUND CONTAMINATION" signs.

REFERENCES:

Documents: HW-60807

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-19

DIMENSIONS:

Length:

Width:

Depth:

Area: 50 square feet

ELEVATION:

WATERTABLE:

LOCATION: 200 West

HRS Migration Score: 1.035

COORDINATES:

DESCRIPTION OF RELEASE:

Drainage from the TBP and U03 plants overflowed, tank and crib vents.

DATE OF OCCURRENCE: Spring, 1953

DESCRIPTION OF WASTE:

Organic waste and cell drainage. Readings to 11.5 rad/hr at 3 inches.

EXTENT OF CONTAMINATION:

An area of approximately 50 sq. ft. near the 361-U settling tank and the 216-UR crib.

REMEDIAL ACTION:

Decontamination was attempted and the area was then backfilled.

REFERENCES:

Documents: HW-60807

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-20

DIMENSIONS:

Length:

Width:

Depth:

Area: 1000 square feet

ELEVATION: 667 feet

WATERTABLE: 190 feet

LOCATION: 200 West

COORDINATES: N35800/W7540

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Leakage from the 241-S-151 diversion box contaminated an area near the 241-SX tank farm.

DATE OF OCCURRENCE: Jan - Feb, 1953

DESCRIPTION OF WASTE:

Unknown beta/gamma.

EXTENT OF CONTAMINATION:

Approximately 1000 square feet around the 241-S-151 diversion box.

REMEDIAL ACTION:

The contamination was covered with 1000 sq. ft. of gravel. The area was removed from radiation zone status in January of 1971.

REFERENCES:

Documents: ARH-2015 part 4 and ARH-2757 part 4

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-21

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 718 feet

WATERTABLE: 258 feet

LOCATION: 200 West
COORDINATES: N43650/W73000

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Failure of the process line at the 241-TX-154 diversion box caused a discharge to the ground.

DATE OF OCCURRENCE: July, 1953

DESCRIPTION OF WASTE:

Unknown beta/gamma. A dose rate as high as 25 rad/hr at 8 inches were reported.

EXTENT OF CONTAMINATION:

An area on both sides of the road between 221-T and 222-T Bldgs.

REMEDIAL ACTION:

The area was covered with blacktop and posted "UNDERGROUND CONTAMINATION."

REFERENCES:

Documents: HW-60807

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-22

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 705 feet
WATERTABLE: 227 feet

LOCATION: 200 West
COORDINATES: N383250/W75055

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

An overflow of UNH solution.

DATE OF OCCURRENCE: June, 1953

DESCRIPTION OF WASTE:

UNH solution, an estimate 300 pounds of uranium.

EXTENT OF CONTAMINATION:

A vessel vent blower pit, a french drain, and an area around
221-U Bldg.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: ARH-2757 part 4 and HW-60807
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-23

DIMENSIONS:

Length:

Width:

Depth:

Area: 300 square feet

ELEVATION: 668 feet

WATERTABLE: 188 feet

LOCATION: 200 West

COORDINATES: N40085/W76530

HRS Migration Score: 0.862

DESCRIPTION OF RELEASE:

A fire in a waste box.

DATE OF OCCURRENCE: June, 1953

DESCRIPTION OF WASTE:

Plutonium - readings to 10,000 d/m.

EXTENT OF CONTAMINATION:

An area approximately 300 square feet south of the 234-5 Bldg.

REMEDIAL ACTION:

Area was covered with blacktop and posted with "DANGER- DO NOT EXCAVATE IN THIS AREA WITHOUT SWP PERMISSION" signs.

REFERENCES:

Documents:

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-24

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 664 feet

WATERTABLE: 195 feet

LOCATION: 200 West

COORDINATES: N383750/W75855

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

Contamination from a violent chemical reaction in the 002 blending tank, 244-UR vault.

DATE OF OCCURRENCE: April 30, 1953

DESCRIPTION OF WASTE:

Metal waste supernatant. Readings from 500 to 1000 c/m.

EXTENT OF CONTAMINATION:

The road near the 241-UR tank farm.

REMEDIAL ACTION:

The contamination was backfilled and stabilized.

REFERENCES:

Documents: Manufacturing Department Radiation Incident Investigation #65 (HW- 28

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-26

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 676 feet

WATERTABLE: 215 feet

LOCATION: 200 West

COORDINATES: N43000/W77700

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Spotty contamination from burial operations in the 200 West Burial Garden.

DATE OF OCCURRENCE: November 27, 1953

DESCRIPTION OF WASTE:

Ruthenium. Readings from 600 mrep/hr to 2 rep/hr.

EXTENT OF CONTAMINATION:

An area near the garden and along the 200 West Area railroad line.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: Manufacturing Department Radiation Incident Investigation #94

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-27

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 729 feet

WATERTABLE: 260 feet

LOCATION: 200 West
COORDINATES: N43985/W73085

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

The failure of an unencased first-cycle waste line contaminated an area in T-Plant.

DATE OF OCCURRENCE: 1954

DESCRIPTION OF WASTE:

First cycle process waste.

EXTENT OF CONTAMINATION:

Within T-Plant. Exact location is not known.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: ARH-780 (ref. to HW-33962)

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-28

DIMENSIONS:

Length: 100 feet

Width: 30 feet

Depth:

Area:

ELEVATION: 668 feet

WATERTABLE: 195 feet

LOCATION: 200 West

COORDINATES: N41545/W74755

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

A leak from a jumper in 241-TX-155 diversion box.

DATE OF OCCURRENCE: 1954

DESCRIPTION OF WASTE:

Not identified in reference.

EXTENT OF CONTAMINATION:

An area of approximately 30 ft. by 100 ft. to the west of the diversion box.

REMEDIAL ACTION:

The area was covered with clean soil and temporarily posted a radiation zone. The fence and signs have since disappeared.

REFERENCES:

Documents: HW-60807

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-29

DIMENSIONS:

Length: 100 feet
Width: 75 feet
Depth:
Area:

ELEVATION: 668 feet
WATERTABLE: 195 feet

LOCATION: 200 West
COORDINATES: N42000/W75540

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

A failed process line leading to the 241-TX-153 diversion box contaminated an area approximately 75 ft. by 100 ft. along the east side of Camden Ave.

DATE OF OCCURRENCE: November 15, 1954

DESCRIPTION OF WASTE:

Approximately 1000 gal of first cycle supernatant containing rare earth metals plus Y, Cs, Sb, Ce, Ru, Nb and Te.
Dose rates were 11.5 rad/hr at 2 inches, including 3.5 r/hr.

EXTENT OF CONTAMINATION:

An area approximately 75 ft. by 100 ft. along the east side of Camden Ave.

REMEDIAL ACTION:

The run off area was hosed down to prevent wind-borne spread of contamination. The area was backfilled with earth and later covered with gravel.

REFERENCES:

Documents: Summary of CPD and Environmental Activities and HW-33979
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-30

DIMENSIONS:

Length: 90 feet
Width: 20 feet
Depth: 10 feet
Area:

ELEVATION: 674 feet
WATERTABLE: 202 feet

LOCATION: 200 West
COORDINATES: N34965/W73384

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

REDOX stack flush operations.

DATE OF OCCURRENCE: July, 1954

DESCRIPTION OF WASTE:

Predominately Ru and ZrNb. Approximately 5 Ci beta and 2-3 Ci gamma.

EXTENT OF CONTAMINATION:

A 20 ft. wide by 90 ft. long by 10 ft. deep pit near the northeast corner of the REDOX stack.

REMEDIAL ACTION:

The pit was covered with several feet of clean soil.

REFERENCES:

Documents: HW-60807
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-32

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 674 feet

WATERTABLE: 202 feet

LOCATION: 200 West
COORDINATES: N35020/W74340

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

A UNH line transfer line enroute to 224-U from REDOX broke, discharging UNH solution to the ground.

DATE OF OCCURRENCE: 1954

DESCRIPTION OF WASTE:

UNH solution.

EXTENT OF CONTAMINATION:

An area near the northwest corner of the REDOX exclusion area.

REMEDIAL ACTION:

The contamination was covered with clean soil. The area was removed from radiation zone status in February of 1971.

REFERENCES:

Documents: ARH-2015 part 4 and ARH-2757 part 4, HW-60807

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-33

DIMENSIONS:

Length: 3 feet
Width: 3 feet
Depth:
Area:

ELEVATION: 705 feet
WATERTABLE: 227 feet

LOCATION: 200 West
COORDINATES: N38070/W72750

HRS Migration Score: 0.980

DESCRIPTION OF RELEASE:

A flange leak in the C-5 condensate line caused the contamination.

DATE OF OCCURRENCE: March, 1955

DESCRIPTION OF WASTE:

Not identified in reference.

EXTENT OF CONTAMINATION:

A 3 foot square area 90 feet east of the 224-U Bldg.

REMEDIAL ACTION:

The top 4 inches of contaminated dirt was removed and new dirt filled in. The area was removed from radiation zone status in December of 1970.

REFERENCES:

Documents: ARH-2015 part 4, ARH-2757 part 4 and HW-60807
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-34

DIMENSIONS:

Length:
Width:
Depth:
Area: 1 acre

ELEVATION:
WATERTABLE:

LOCATION: 200 West
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Overflow from an open ditch to REDOX Chemical Sewer trenches.

DATE OF OCCURRENCE: May, 1955

DESCRIPTION OF WASTE:

Contaminants not identified in reference. Maximum dose rate of 1 R/hr at ground surface.

EXTENT OF CONTAMINATION:

One acre between the open ditch and the REDOX Chemical Sewer Trenches.

REMEDIAL ACTION:

The ditch was dredged and the sludge removed, placed in low spots on both sides of the ditch and covered with 2 ft. of soil. The area was removed from radiation zone status in March of 1971.

REFERENCES:

Documents: ARH-2015 part 4 and ARH-2757 part 4
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-35

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 681 feet
WATERTABLE: 209 feet

LOCATION: 200 West
COORDINATES: N35015/W73154

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

A leak in the UNH Line from REDOX to U Plant.

DATE OF OCCURRENCE: September, 1955

DESCRIPTION OF WASTE:

UNH solution.

EXTENT OF CONTAMINATION:

An area outside and to the north of the REDOX exclusion area.

REMEDIAL ACTION:

The contamination was removed to the 200 West Solid Waste Burial Ground. The area was removed from radiation zone status in January of 1972.

REFERENCES:

Documents: ARH-2015 part 4 and ARH-2757 part 4, HW-60807
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-36

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 667 feet
WATERTABLE: 197 feet

LOCATION: 200 West
COORDINATES: N35650/W75150

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Contamination spread from 216-S-1 & 2 via a ruptured test well.

DATE OF OCCURRENCE: August 4, 1955

DESCRIPTION OF WASTE:

Process waste liquid.

EXTENT OF CONTAMINATION:

The 216-S-1 and 2 crib area.

REMEDIAL ACTION:

The test well was promptly backfilled with sand and gravel.

REFERENCES:

Documents: HW-39066
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-37

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 715 feet

WATERTABLE: 247 feet

LOCATION: 200 West

COORDINATES: N39230/W72450

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Disposed of boxes from high radiation level dry waste taken to the 200 West Burning Ground provided ground contamination in the pit.

DATE OF OCCURRENCE: June 10, 1955

DESCRIPTION OF WASTE:

Contents from broken box were contaminated to a maximum of 100 mrad/hr.

EXTENT OF CONTAMINATION:

The 200 West Area Burning Ground.

REMEDIAL ACTION:

The waste cartons were removed to the proper burial trench and the pit was decontaminated.

REFERENCES:

Documents: Summary of CPD and Environmental Activities

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-38

DIMENSIONS:

Length: 30 feet
Width: 15 feet
Depth: 1 foot
Area:

ELEVATION: 672 feet
WATERTABLE: 200 feet

LOCATION: 200 West
COORDINATES: N44085/W72910

HRS Migration Score: 1.089

DESCRIPTION OF RELEASE:

The rupture of a process line near the 241-TX-154 diversion box.

DATE OF OCCURRENCE: 1956

DESCRIPTION OF WASTE:

Unknown beta/gamma. Radiation field of 1.2 r/hr at 80 a distance of feet.

EXTENT OF CONTAMINATION:

An area approximately 15 ft. by 30 ft. near the 241-TX-154 diversion box.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: ARH-780 (ref. to HW-40692)
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-39

DIMENSIONS:

Length: 50 feet
Width: 10 feet
Depth: 3 feet
Area:

ELEVATION: 705 feet
WATERTABLE: 230 feet

LOCATION: 200 West
COORDINATES: N37990/W73175

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

A leak at the 224-U Bldg.

DATE OF OCCURRENCE: March, 1954

DESCRIPTION OF WASTE:

Uranium - less than 0.02 Ci cubic meters.

EXTENT OF CONTAMINATION:

An area southeast of the 224-U Bldg.

REMEDIAL ACTION:

The contamination was buried in a trench 10 ft. wide by 50 ft. long and covered with 3 ft. of soil. The area was removed from radiation zone status in June of 1972 and is now under the 224-UA addition.

REFERENCES:

Documents: ARH-2015 part 4, ARH-2757 part 4 and HW-60807
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-40

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 718 feet
WATERTABLE: 258 feet

LOCATION: 200 West
COORDINATES: N43975/W72950

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Leakage from the 154-TX diversion box and the 302 catch tank.

DATE OF OCCURRENCE: January 3, 1956

DESCRIPTION OF WASTE:

2,000 gal. of an unknown liquid.

EXTENT OF CONTAMINATION:

Southeast side of the 221-T Bldg. between the 154-TX diversion box and the 302 catch tank.

REMEDIAL ACTION:

The initial spill covered about 1500 sq. ft. but after backfilling with clean dirt approximately 4,000 sq. ft. around the 221-T Bldg. was affected. The area was later sprayed with tar.

REFERENCES:

Documents: HW-60807
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-41

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 687 feet
WATERTABLE: 210 feet

LOCATION: 200 West
COORDINATES: N34920/W74250

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

A burial box in transit provided ground contamination in the S-Plant area.

DATE OF OCCURRENCE: July 7, 1956

DESCRIPTION OF WASTE:

Unknown beta/gamma. Readings to 1000 mrad/hr.

EXTENT OF CONTAMINATION:

The right-of-way from the 202-S railroad cut to the burial ground.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-42

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 687 feet
WATERTABLE: 210 feet

LOCATION: 200 West
COORDINATES: N33920/W74250

HRS Migration Score: 0.817

DESCRIPTION OF RELEASE:

Contamination spots were found on the ground in S-Plant near a railroad shack. The cause of the contamination is unknown.

DATE OF OCCURRENCE: February 3, 1957

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings to 500 mrad/hr.

EXTENT OF CONTAMINATION:

Ground around a railroad shack near 202-S.

REMEDIAL ACTION:

The ground area between the shack and tracks was cleaned to 2000-5000 c/m background.

REFERENCES:

Documents: Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-43

DIMENSIONS:

Length:

Width:

Depth:

Area: 1200 square feet

ELEVATION: 687 feet

WATERTABLE: 210 feet

LOCATION: 200 West

COORDINATES: N34740/W73350

HRS Migration Score: 0.817

DESCRIPTION OF RELEASE:

Wind blown contamination from nearby radiation zone affected an area in S-Plant.

DATE OF OCCURRENCE: February 12, 1957

DESCRIPTION OF WASTE:

Unknown alpha. Readings to 2000 d/m.

EXTENT OF CONTAMINATION:

Approximately 1200 sq. ft. of blacktop outside an established radiation zone east of 233-S.

REMEDIAL ACTION:

The area was posted as a radiation zone pending cleanup.

REFERENCES:

Documents: Radiation Occurrence Report

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-44

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION:

WATERTABLE:

LOCATION: 200 West

HRS Migration Score: 0.862

COORDINATES:

DESCRIPTION OF RELEASE:

A burial box fell from a flatcar while in transit.

DATE OF OCCURRENCE: October 25, 1957

DESCRIPTION OF WASTE:

Unknown beta/gamma. Readings to 2 R/hr.

EXTENT OF CONTAMINATION:

An area along the railroad track between REDOX and T Plant.

REMEDIAL ACTION:

Reference is not specific as to how a 20 ft. by 25 ft. area was stabilized.

REFERENCES:

Documents: Summary of CPD and Environmental Activities and ARH-780

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-45

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 684 feet
WATERTABLE: 209 feet

LOCATION: 200 West
COORDINATES: N41975/W77530

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Collapse of wooden burial box during burial operations in the 200 West Area Burial Ground.

DATE OF OCCURRENCE: November 6, 1957

DESCRIPTION OF WASTE:

Ruthenium. Maximum reading of 1,100 mrad/hr.

EXTENT OF CONTAMINATION:

An estimated 200 acres within the 200 West Area and 1600 acres outside the 200 West Area.

REMEDIAL ACTION:

Most of the grossly contaminated burial ground was restored to normal use by plowing, road grading and water flushing. Adjacent road surfaces were cleaned by flushing with water. Contaminated areas not cleaned were posted as radiation zones.

REFERENCES:

Documents: HW-54636 and Summary of CPD and Environmental Activities
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-46

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 705 feet
WATERTABLE: 227 feet

LOCATION: 200 West
COORDINATES: N38250/W73000

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Burial operation of an H-2 centrifuge from REDOX resulted in spotty contamination in the Z and U plant areas.

DATE OF OCCURRENCE: 1958

DESCRIPTION OF WASTE:

Not identified in reference.

EXTENT OF CONTAMINATION:

In the 234-5 and 224-U areas.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: ARH-780 (ref. to HW-54319)
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-47

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 670 feet

WATERTABLE: 204 feet

LOCATION: 200 West
COORDINATES: N32000/W72750

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

A dike break caused the contamination of an area of the REDOX pond.

DATE OF OCCURRENCE: June, 1958

DESCRIPTION OF WASTE:

Not identified in reference.

EXTENT OF CONTAMINATION:

An area approximately 150 yards from the REDOX pond dike in a westerly direction and 300 yards north and south.

REMEDIAL ACTION:

In 1959, the contaminated ground was bladed under and posted as a radiation zone.

REFERENCES:

Documents: HW-60807

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-48

DIMENSIONS:

Length:
Width:
Depth:
Area: 1000 square feet

ELEVATION: 705 feet
WATERTABLE: 232 feet

LOCATION: 200 West
COORDINATES: N39310/W73760

HRS Migration Score: 0.862

DESCRIPTION OF RELEASE:

Leakage from a contaminated jumper in transit.

DATE OF OCCURRENCE: July 9, 1958

DESCRIPTION OF WASTE:

Unknown beta/gamma. Readings to 9 rad/hr.

EXTENT OF CONTAMINATION:

An area approximately 1000 square feet at the 221-U railroad crossing.

REMEDIAL ACTION:

Recommendations were made to establish a temporary radiation zone boundary and of the necessary decontamination.

REFERENCES:

Documents: Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-49

DIMENSIONS:

Length:

Width:

Depth:

Area: 5000 square feet

ELEVATION: 663 feet

WATERTABLE: 192 feet

LOCATION: 200 West

COORDINATES: N35180/W75550

HRS Migration Score: 0.908

DESCRIPTION OF RELEASE:

Approximately 500 square feet of ground outside the southeast corner of the 241-SX tank farm were contaminated by that farm.

DATE OF OCCURRENCE: July 31, 1958

DESCRIPTION OF WASTE:

Unknown beta/gamma. Readings to 150 mrad/hr with a single spot up to 10 rad/hr.

EXTENT OF CONTAMINATION:

Approximately 5000 sq. ft. of ground outside the southeast corner of the 241-SX tank farm.

REMEDIAL ACTION:

Recommendations were made to establish a radiation zone.

REFERENCES:

Documents: Radiation Occurrence Report #41

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-50

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 663 feet

WATERTABLE: 192 feet

LOCATION: 200 West

COORDINATES: N35500/W75430

HRS Migration Score: 1.043

DESCRIPTION OF RELEASE:

Release from the 241-SX tank farm.

DATE OF OCCURRENCE: August 25, 1958

DESCRIPTION OF WASTE:

Unknown beta/gamma. Readings of 40,000 c/m with spots up to 100 mrad/hr.

EXTENT OF CONTAMINATION:

An area of about 2 acres, including a 200 foot stretch of Camden Ave. east of the 241-SX tank farm.

REMEDIAL ACTION:

Camden Ave. was roped off and posted as a radiation zone.

REFERENCES:

Documents: Radiation Occurrence Report

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-51

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 667 feet

WATERTABLE: 190 feet

LOCATION: 200 West
COORDINATES: N35420/W75570

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Leakage from the 241-S-151 diversion box contaminated a narrow strip of ground south of the 241-S-151 diversion box, across Tenth street and out approximately 100 yds. beyond the area fence.

DATE OF OCCURRENCE: September 12, 1958

DESCRIPTION OF WASTE:

Unknown beta/gamma. Readings within 100 ft. of the diversion box were up to 50 mrad/hr. Readings outside the fenced area were on the order of 4,000 c/m.

EXTENT OF CONTAMINATION:

A narrow strip of ground south of the 241-S-151 diversion box, across Tenth Street and out approximately 100 yds. beyond the area fence.

REMEDIAL ACTION:

The contaminated soil was saturated with water and turned over with a bulldozer.

REFERENCES:

Documents: HW-84619 and Radiation Occurrence Report #52

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-52

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 676 feet
WATERTABLE: 202 feet

LOCATION: 200 West
COORDINATES: N34090/W75310

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Leakage from the 241-S diversion box caused ground contamination in the immediate vicinity.

DATE OF OCCURRENCE: September 15, 1958

DESCRIPTION OF WASTE:

Not identified in reference.

EXTENT OF CONTAMINATION:

An oval shaped area approximately 300 ft. wide lying immediately south of the diversion box toward 10th St. The area includes the 207 retention basin at its south end.

REMEDIAL ACTION:

No mention of any action concerning cleanup.

REFERENCES:

Documents: HW-60807
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-53

DIMENSIONS:

Length:

Width:

Depth:

Area: 250 acres

ELEVATION: 676 feet

WATERTABLE: 215 feet

LOCATION: 200 West

COORDINATES: N42450/W77570

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Collapse of a burial box containing REDOX cell jumpers during backfilling operations.

DATE OF OCCURRENCE: January 8, 1959

DESCRIPTION OF WASTE:

Ru-106. Readings ranged from 50 mrad/hr at the burial site to 60,000 c/m at T-Plant. Readings east of the limited area fence were up to 400 c/m.

EXTENT OF CONTAMINATION:

An area extending in an easterly direction from the 200 West Area Burial Ground to within 300 yards of the east perimeter fence (approximately 250 acres.)

REMEDIAL ACTION:

Contaminated roads were washed down with water from a tank truck. The contamination was generally fixed in a 2 inch layer of snow. The burial ground and an area several hundred yards to the east were plowed to further fix the contamination.

REFERENCES:

Documents: HW-84619, ARH-780

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-55

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 705 feet
WATERTABLE: 227 feet

LOCATION: 200 West
COORDINATES: N38075/W73102

HRS Migration Score: 1.089

DESCRIPTION OF RELEASE:

A broken loading hose caused the contamination of the 224-U asphalt loading ramp and a nearby roadway.

DATE OF OCCURRENCE: April 12, 1960

DESCRIPTION OF WASTE:

1.5 tons of uranium powder that had been separated from fission products.

EXTENT OF CONTAMINATION:

The 224-U asphalt loading ramps and a nearby roadway.

REMEDIAL ACTION:

Most of the powder was swept up and put in drums for recovery. The rest was washed off the asphalt and into the ground surface.

REFERENCES:

Documents: Summary of CPD and Environmental Activities
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-56

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 687 feet
WATERTABLE: 210 feet

LOCATION: 200 West
COORDINATES: N34965/W73384

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

Heavy rainfall washed contamination from a radiation zone.

DATE OF OCCURRENCE: February 6, 1961

DESCRIPTION OF WASTE:

Unknown beta/gamma. Gravel was contaminated to 30,000 c/m and blacktop to 80,000 c/m.

EXTENT OF CONTAMINATION:

Approximately 200 sq. ft. of graveled surface and 50 sq. ft. of blacktop near the 202-S Column Carrier Trench.

REMEDIAL ACTION:

The contaminated area was immediately roped off from traffic.

REFERENCES:

Documents: Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-57

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION:
WATERTABLE:

LOCATION: 200 West
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Fire in the plutonium extraction column near the 233-S Bldg.

DATE OF OCCURRENCE: November 6, 1963

DESCRIPTION OF WASTE:

Plutonium.

EXTENT OF CONTAMINATION:

An area in the immediate vicinity of the 233-S Bldg.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: HW-84619
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-58

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 703 feet
WATERTABLE: 247 feet

LOCATION: 200 West

HRS Migration Score: ENS

COORDINATES: N44870/W73940 (beginning), N42450/W77420 (end)

DESCRIPTION OF RELEASE:

221-T canyon cell blocks in transit for burial spread contamination from the 221-T railroad cut to the 200 West Burial Ground.

DATE OF OCCURRENCE: April 26, 1965

DESCRIPTION OF WASTE:

Beta/gamma. Readings to a maximum of 5 rad/hr, including 100,000 c/m.

EXTENT OF CONTAMINATION:

From the 221-T railroad cut to the 200 West Burial Ground.

REMEDIAL ACTION:

Contaminated dirt was removed from the railroad bed.

REFERENCES:

Documents: Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-59

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 679 feet
WATERTABLE: 208 feet

LOCATION: 200 West
COORDINATES: N34500/W74000

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

The failure of the F-1 process vessel coil in 202-S.

DATE OF OCCURRENCE: September 26, 1965

DESCRIPTION OF WASTE:

Unknown beta/gamma. Maximum dose rate at the #1 pond inlet was 190 mrad/hr.

EXTENT OF CONTAMINATION:

Waste went directly to the REDOX pond.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-60

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 705 feet

WATERTABLE: 232 feet

LOCATION: 200 West
COORDINATES: N39310/W73760

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

A defective transfer box containing PUREX equipment contaminated.

DATE OF OCCURRENCE: February 25, 1966

DESCRIPTION OF WASTE:

Unknown beta/gamma. Readings from a few thousand counts per minute to a maximum of 1 rad/hr.

EXTENT OF CONTAMINATION:

An area extending 75 yds. along the 221-U railroad cut from the tunnel door.

REMEDIAL ACTION:

The contamination was isolated and cleaned.

REFERENCES:

Documents: Radiation Occurrence Report

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-61

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 679 feet
WATERTABLE: 208 feet

LOCATION: 200 West
COORDINATES: N34460/W74120

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

A fire hose ruptured while flushing the H-10 to the 241-SX transfer line.

DATE OF OCCURRENCE: April 24, 1966

DESCRIPTION OF WASTE:

Unknown beta/gamma. Readings from 4,000 to 100,000 c/m.

EXTENT OF CONTAMINATION:

An area of about 200 sq. ft. near the southwest corner of the 202-S Bldg.

REMEDIAL ACTION:

Contaminated walkways were washed down and released from radiation zone status. The top 6 inches of contaminated soil were removed.

REFERENCES:

Documents: Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-62

DIMENSIONS:

Length: 40 yds.
Width: 2 yds.
Depth:
Area:

ELEVATION: 672 feet
WATERTABLE: 200 feet

LOCATION: 200 West
COORDINATES: N43215/W75450

HRS Migration Score: 1.307

DESCRIPTION OF RELEASE:

Ruptured transfer line.

DATE OF OCCURRENCE: May 4, 1966

DESCRIPTION OF WASTE:

Contaminated second cycle waste (bismuth phosphate). Readings from 20 to 5000 mrad/hr, including a maximum of 3 R/hr.

EXTENT OF CONTAMINATION:

An area approximately 2 yds. wide and 40 yds. long at the corner of 23rd St. and Camden Ave.

REMEDIAL ACTION:

The area was isolated and covered with sand and gravel.

REFERENCES:

Documents: Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-63

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 707 feet
WATERTABLE: 247 feet

LOCATION: 200 West
COORDINATES: N43215/W74615

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

Spotty contamination on 23rd St. was found along the road and shoulder from the 241-TX-153 diversion box jumper.

DATE OF OCCURRENCE: September 21, 1966

DESCRIPTION OF WASTE:

Sr-90 - approximately 1 Ci.

EXTENT OF CONTAMINATION:

An area from 500 ft. west of the west railroad crossing on the 23rd St. to Bridgeport and 23rd St.

REMEDIAL ACTION:

Spotty contamination on the road was removed while the contamination on the shoulder of the road was covered with 6 inches of soil. The area was removed from radiation zone status in November of 1972.

REFERENCES:

Documents: ARH-2015 part 4 and ARH-2757 part 4
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-64

DIMENSIONS:

Length: 50 feet
Width:
Depth:
Area:

ELEVATION: 672 feet
WATERTABLE: 200 feet

LOCATION: 200 West
COORDINATES: N43215/W75450

HRS Migration Score: 0.862

DESCRIPTION OF RELEASE:

Contamination is believed to have spread from a nearby radiation zone to the east.

DATE OF OCCURRENCE: February 13, 1969

DESCRIPTION OF WASTE:

Cs-137. Readings to 600 c/m.

EXTENT OF CONTAMINATION:

A 50 foot strip of ground along Camden Ave. at its intersection with 23rd St.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-65

DIMENSIONS:

Length: 100 feet
Width: 50 feet
Depth: 1 foot
Area:

ELEVATION: 703 feet
WATERTABLE: 247 feet

LOCATION: 200 West
COORDINATES: N44870/W73940

HRS Migration Score: 0.626

DESCRIPTION OF RELEASE:

Contamination found at the T plant railroad cut was from a rail car carrying radioactive material not effectively contained.

DATE OF OCCURRENCE: October 27, 1969

DESCRIPTION OF WASTE:

Unknown beta/gamma. Readings from 5,000 c/m to 150 mrad/hr.

EXTENT OF CONTAMINATION:

The T-plant railroad cut.

REMEDIAL ACTION:

Decontamination of the cut was started.

REFERENCES:

Documents: Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-66

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 644 feet
WATERTABLE: 255 feet

LOCATION: 200 West
COORDINATES: N44930/W51990

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

A leaking manometer sensing line from the 8-1 tank inside 221-B contaminated an area in the 216-B-2-2 ditch and 216-B-3 pond.

DATE OF OCCURRENCE: March 22, 1970

DESCRIPTION OF WASTE:

Sr-90. Approximately 1000 Ci released.

EXTENT OF CONTAMINATION:

An area in the 216-B-2-2 ditch and 216-B-3 pond.

REMEDIAL ACTION:

The ditch was covered with clean dirt. The first 2,400 ft. of the ditch was covered with a plastic sheet root barrier. A new ditch (216-B-2-3) was dug to replace B-2-2.

REFERENCES:

Documents: RHO-CD-673
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-67

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 715 feet
WATERTABLE: 253 feet

LOCATION: 200 West
COORDINATES: N44145/W73350

HRS Migration Score: 0.862

DESCRIPTION OF RELEASE:

A contaminated electric lift located outside a radiation zone affected an area 3 ft. by 24 ft. on the north side of the 2706-T Bldg.

DATE OF OCCURRENCE: August 5, 1970

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings to 20,000 c/m.

EXTENT OF CONTAMINATION:

An area 3 ft. by 24 ft. on the north side of the 2706-T Bldg.

REMEDIAL ACTION:

No mention of any action concerning cleanup.

REFERENCES:

Documents: Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-68

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 648 feet

WATERTABLE: 182 feet

LOCATION: 200 West

COORDINATES: N35800/W78105

HRS Migration Score: 0.980

DESCRIPTION OF RELEASE:

The cause of the contamination was not conclusively determined.

DATE OF OCCURRENCE: February 8, 1972

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings from 5,000 to 80,000 c/m.

EXTENT OF CONTAMINATION:

An area near the intersection of Dayton Ave and 13th Street.

REMEDIAL ACTION:

The roadway was barricaded and its decontamination initiated.

REFERENCES:

Documents: Radiation Occurrence Report

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-69

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 676 feet
WATERTABLE: 202 feet

LOCATION: 200 West
COORDINATES: N34860/W74220

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

The cause of the release is unknown.

DATE OF OCCURRENCE: March 2, 1973

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings from 2,000 to 50,000 c/m, to 5,000 mrad/hr. at the RR gate and from 5,000 to 100,000 c/m outside the REDOX exclusion fence.

EXTENT OF CONTAMINATION:

An area spreading north and northeast from the 204-S Unloading Station, with contamination also being detected between the 204-S railroad spur and the REDOX railroad cut.

REMEDIAL ACTION:

The area was surveyed and zones were established.

REFERENCES:

Documents: Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-70

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 715 feet
WATERTABLE: 247 feet

LOCATION: 200 West
COORDINATES: N39800/W72200

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Disposal of contaminated material in a noncontaminated burning trench (the 200 West Area Burning Ground).

DATE OF OCCURRENCE: January 22, 1973

DESCRIPTION OF WASTE:

Alpha and unknown beta/gamma - readings from 20,000 to 30 mrad/hr and from 5,000 to 200,000 d/m.

EXTENT OF CONTAMINATION:

200 West Burning Ground.

REMEDIAL ACTION:

Fabro-film was sprayed on the contaminated areas to identify and stabilize the contamination.

REFERENCES:

Documents: Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-71

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 664 feet
WATERTABLE: 195 feet

LOCATION: 200 West

HRS Migration Score: 1.307

COORDINATES: N38130/W75570 (beginning), N42450/W77420 (end)

DESCRIPTION OF RELEASE:

A heel-jet from the 102-U tank in transit affected spots along the route from the 241-U tank farm to the 200 West Burial Ground. The route included 16th St. and Dayton Ave.

DATE OF OCCURRENCE: January 24, 1974

DESCRIPTION OF WASTE:

A heel jet from the 102-U tank.

EXTENT OF CONTAMINATION:

Spots along the route from the 241-U tank farm to the 200 West Burial Ground with counts up to 100,000 c/m.

REMEDIAL ACTION:

The roadway was cleaned and released after extensive effort.

REFERENCES:

Documents: Radiation Occurrence Report #74-01-04
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-72

DIMENSIONS:

Length: 50 feet
Width: 50 feet
Depth:
Area:

ELEVATION: 676 feet
WATERTABLE: 215 feet

LOCATION: 200 West
COORDINATES: N42278/W77431

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Previously buried laboratory waste.

DATE OF OCCURRENCE: October 21, 1975

DESCRIPTION OF WASTE:

Gross alpha and mixed fission product - beta/gamma readings to 100,000 c/m and alpha readings to 70,000 d/m.

EXTENT OF CONTAMINATION:

An area approximately 50 ft. by 50 ft. in the 218-W-4A Burial Ground.

REMEDIAL ACTION:

The contaminated waste was picked up and the area was covered with 6 inches of sand, a layer of urea bore, a layer of 10 mil plastic, 12-14 inches of dirt and 3-4 inches of rock.

REFERENCES:

Documents: Unusual Occurrence Report #75-121
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-73

DIMENSIONS:

Length: 1200 feet
Width: 20 feet
Depth: 1 foot
Area:

ELEVATION: 729 feet
WATERTABLE: 260 feet

LOCATION: 200 West
COORDINATES: N44145/W73350

HRS Migration Score: 0.700

DESCRIPTION OF RELEASE:

A faulty transfer box railroad car being moved for repairs contaminated the railroad right-of-way between the 221-T tunnel and the 2706-T Bldg. (approximately 400 yards).

DATE OF OCCURRENCE: October 16, 1974

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings to 40 mrad/hr.

EXTENT OF CONTAMINATION:

The railroad right-of-way between the 221-T tunnel and the 2706-T Bldg.

REMEDIAL ACTION:

No mention of any efforts taken to cleanup ground contamination.

REFERENCES:

Documents: Unusual Occurrence Report #74-137
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-74

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 676 feet
WATERTABLE: 195 feet

LOCATION: 200 West
COORDINATES: N39600/W76415

HRS Migration Score: 0.980

DESCRIPTION OF RELEASE:

A leak in the line from the effluent header D-3 to the D-8 tank in 241-Z.

DATE OF OCCURRENCE: May 18, 1976

DESCRIPTION OF WASTE:

Alpha - maximum readings of 8,000 d/m.

EXTENT OF CONTAMINATION:

A small area of approximately 20 square inches below an overground polyethylene line.

REMEDIAL ACTION:

The contaminated soil was picked up and packaged for burial.

REFERENCES:

Documents: Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-75

DIMENSIONS:

Length: 35 feet
Width: 35 feet
Depth: 1 foot
Area:

ELEVATION: 676 feet
WATERTABLE: 195 feet

LOCATION: 200 West
COORDINATES: N39600/W76415

HRS Migration Score: 0.817

DESCRIPTION OF RELEASE:

Contaminated equipment inside the D-7 Sample Cabinet.

DATE OF OCCURRENCE: January 9, 1975

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings from 2,000 d/m to >40,000 d/m direct; smearable to 20,000 d/m.

EXTENT OF CONTAMINATION:

An area approximately 70 feet square near 241-Z.

REMEDIAL ACTION:

The contaminated dirt was placed in a 55 gal. barrel for burial.

REFERENCES:

Documents: Radiation Occurrence Report #75-01-01
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-76

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 668 feet
WATERTABLE: 195 feet

LOCATION: 200 West
COORDINATES: N42035/W76065

HRS Migration Score: 0.581

DESCRIPTION OF RELEASE:

Contaminated rabbit fecal pellets.

DATE OF OCCURRENCE: August 24, 1977

DESCRIPTION OF WASTE:

Cs-137, Cs-134, Eu-155, Eu-154, and Sr-90.

EXTENT OF CONTAMINATION:

An area approximately 50 yards by 100 yards around the 241-TX diversion box with readings up to 100 mRad/hr.

REMEDIAL ACTION:

The contaminated pellets and soil were removed from the TX-155 excavation hole and taken to dry waste burial. The remaining contamination was covered with clean soil.

REFERENCES:

Documents: Unusual Occurrence Report #77-180
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-77

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 729 feet

WATERTABLE: 260 feet

LOCATION: 200 West

COORDINATES: N45000/W71000

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Contaminated coyote feces in the northeast corner of 200 West Area.

DATE OF OCCURRENCE: April 4, 1978

DESCRIPTION OF WASTE:

Pu-239 and Am-241 - beta/gamma readings to 40,000 c/m and alpha readings to 55,000 d/m.

EXTENT OF CONTAMINATION:

Northeast corner of the 200 West Area.

REMEDIAL ACTION:

All contaminated feces were collected and sent to the laboratory for evaluation and radioisotopic analysis.

REFERENCES:

Documents: Unusual Occurrence Report #78-36

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-78

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION:

WATERTABLE:

LOCATION: 200 West
COORDINATES:

HRS Migration Score: 0.862

DESCRIPTION OF RELEASE:

A spill from loading pallet during movement affected an area approximately 40 sq. ft. located south of the UO3 storage area.

DATE OF OCCURRENCE: August 21, 1970

DESCRIPTION OF WASTE:

UO3 powder.

EXTENT OF CONTAMINATION:

An area approximately 40 square feet located south of the UO3 storage area was contaminated to 20,000 c/m.

REMEDIAL ACTION:

The contaminated dirt was removed.

REFERENCES:

Documents: Radiation Occurrence Report

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-79

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 676 feet
WATERTABLE: 195 feet

LOCATION: 200 West
COORDINATES: N39600/W76415

HRS Migration Score: 1.198

DESCRIPTION OF RELEASE:

Failure of pH line at the 241-Z Sump.

DATE OF OCCURRENCE: October 6, 1978

DESCRIPTION OF WASTE:

Alpha - readings from 500 to 2,000 d/m.

EXTENT OF CONTAMINATION:

Two small areas: 1) under the pH meter lines and 2) north of the D-7 and D-8 sample cabinets outside of the 241-Z Sump radiation zone fence.

REMEDIAL ACTION:

Decontamination of the soil areas was completed on October 30, 1978.

REFERENCES:

Documents: Unusual Occurrence Report #78-108
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-80

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 661 feet
WATERTABLE: 180 feet

LOCATION: 200 West
COORDINATES: N35800/W75700

HRS Migration Score: 1.198

DESCRIPTION OF RELEASE:

The 241-S and 241-SX tank farms contaminated the 244-S catch station construction site and other areas adjacent to the 241-S and 241-SX tank farms.

DATE OF OCCURRENCE: October 24, 1978

DESCRIPTION OF WASTE:

Sr-90 and Cs-137 - readings to 60,000 c/m.

EXTENT OF CONTAMINATION:

The 244-S catch station construction site and other areas adjacent to the 241-S and 241-SX tank farms.

REMEDIAL ACTION:

The contaminated areas outside the farms were posted and operated as radiation zones.

REFERENCES:

Documents: Unusual Occurrence Report #78-128
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-81

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 661 feet
WATERTABLE: 180 feet

LOCATION: 200 West
COORDINATES: N35800/W75700

HRS Migration Score: 1.089

DESCRIPTION OF RELEASE:

Airborne migration of contamination from the 241-S and 241-SX tank farms.

DATE OF OCCURRENCE: January 2, 1979

DESCRIPTION OF WASTE:

Unknown beta/gamma - readings from 500 to >100,000 c/m.

EXTENT OF CONTAMINATION:

An area between the 241-S and 241-SX tank farms was affected.

REMEDIAL ACTION:

The area was cleaned and released; however, upon detection of subsequent contamination the area was roped off and posted with the correct radiation signs.

REFERENCES:

Documents: Radiation Occurrence Report and Unusual Occurrence Report #79-1
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-82

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 667 feet
WATERTABLE: 197 feet

LOCATION: 200 West
COORDINATES: N35700/W75450

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Traffic from daily routine surveillance deposited specks outside the radiation zone.

DATE OF OCCURRENCE: January 15, 1980

DESCRIPTION OF WASTE:

Unknown beta/gamma - spots outside the zone read up to 80,000 c/m.

EXTENT OF CONTAMINATION:

An area near the 241-S-151 diversion box and the 302-S catch tank.

REMEDIAL ACTION:

Specks outside the zone were picked up and removed to the burial ground.

REFERENCES:

Documents: Radiation Occurrence Report
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-84

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 684 feet

WATERTABLE: 209 feet

LOCATION: 200 West
COORDINATES: N42099/W77458

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Liquid spill during course of pump burial in the 200 West Area Burial Ground.

DATE OF OCCURRENCE: July 23, 1980

DESCRIPTION OF WASTE:

Unkown beta/gamma - readings to 2,000 mrad/hr.

EXTENT OF CONTAMINATION:

200 West Area Burial Ground.

REMEDIAL ACTION:

The contaminated soil was picked up and placed in the burial trench.

REFERENCES:

Documents: Radiation Occurrence Report

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-95

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 681 feet

WATERTABLE: 217 feet

LOCATION: 200 West

COORDINATES: N34220/W75200

HRS Migration Score: 0.690

DESCRIPTION OF RELEASE:

Coil leaks in 202--S Bldg. resulted in contamination of cooling water.

DATE OF OCCURRENCE: 1954

DESCRIPTION OF WASTE:

Approximately 10 Ci of mixed fission products.

EXTENT OF CONTAMINATION:

REDOX retention basin approximately 1200 ft. due west of 222-S Bldg.

REMEDIAL ACTION:

The concrete lined basin was covered with clean soil after it became contaminated.

REFERENCES:

Documents: RHO-CD-673, ARH-2015 Par 4, ARH-2757

Photographs:

Drawings: H-2-44510

SITE ID NO.: UPR-200-W-96

DIMENSIONS:

Length:

Width:

Depth:

Area: 150 square yards

ELEVATION: 676 feet

WATERTABLE: 206 feet

LOCATION: 200 West

COORDINATES: N34625/W74050

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

233-S filter house drain line backed up and overflowed into a low spot on the ground (150 yards square).

DATE OF OCCURRENCE: January 9, 1969

DESCRIPTION OF WASTE:

.01 g of Pu-239 contaminated water from the filter house drain line.

EXTENT OF CONTAMINATION:

An area of 150 square yards directly north of the 233-S filter house.

REMEDIAL ACTION:

Area was covered with 78 yards of clean gravel.

REFERENCES:

Documents: RHO-CD-673, ARH-2757 part 4

Photographs:

Drawings: H-2-44510

SITE ID NO.: UPR-200-W-97

DIMENSIONS:

Length:

Width:

Depth: 3 ft.

Area:

ELEVATION: 679 feet

WATERTABLE: 211 feet

LOCATION: 200 West

HRS Migration Score: 1.035

COORDINATES: N43163/W75348, N43163/W65468, N43023/W75468, N43023/W75348

DESCRIPTION OF RELEASE:

Broken underground line.

DATE OF OCCURRENCE: May, 1966

DESCRIPTION OF WASTE:

Liquid waste solution. High-salt, neutral/basic. Fission products - approximately 10 Ci. Readings up to 60,000 c/m.

EXTENT OF CONTAMINATION:

An area from the southeast corner of 23rd St. and Camden Ave. south to near 22nd St.

REMEDIAL ACTION:

All surface contamination was removed to depth of 3 feet and taken to the 200 West Area Burial Ground. Backfilled with 3 feet of clean soil.

REFERENCES:

Documents: RHO-CD-673, ARH-2015, ARH-2757, WIDS

Photographs:

Drawings: H-2-44510

SITE ID NO.: UPR-200-W-98

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 718 feet

WATERTABLE: 260 feet

LOCATION: 200 West

COORDINATES: N43550/W73430

HRS Migration Score: 1.143

DESCRIPTION OF RELEASE:

In the spring of 1945, radioactive waste from a broken process waste transfer line surfaced at section R-19, 222-7 Building and spread mixed fission contamination over a small surface of the ground.

DATE OF OCCURRENCE: Spring, 1945

DESCRIPTION OF WASTE:

Contaminated waste from 221-T. High-salt, neutral/basic. Fission products. Approximately 10 Ci, maximum dose rate of 20 r/hr at 2 inches.

EXTENT OF CONTAMINATION:

An area near the southeast corner of the 221-T Bldg.

REMEDIAL ACTION:

Area was covered with approximately 4 feet of clean soil. A blacktop road was constructed over the top of it in 1977.

REFERENCES:

Documents: RHO-CD-673

Photographs:

Drawings: H-2-44510

SITE ID NO.: UPR-200-W-99

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 660 feet
WATERTABLE: 181 feet

LOCATION: 200 West
COORDINATES: N40750/W75400, N41500/W75200

HRS Migration Score: 0.690

DESCRIPTION OF RELEASE:

Ground and road contamination along Camden Avenue and adjacent ground surfaces. Sr-90 particles were found at a frequency of 1 particle per square yard.

DATE OF OCCURRENCE: September, 1966

DESCRIPTION OF WASTE:

Two plumes of airborne contamination that floated northeast and southeast from 153-TX diversion box depositing approximately 1 Ci Sr-90 particles. Maximum readings up to 700 mrad/hr were found.

EXTENT OF CONTAMINATION:

An area running 250 yards north and south along Camden and extending from 75 to 100 yards east of Camden.

REMEDIAL ACTION:

Road contamination was covered with a new tar mat, shoulders of the roads were "fixed" with tar, and the field to the east of Camden Avenue was turned under to cover the particulate material.

REFERENCES:

Documents: RHO-CD-673
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-100

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 668 feet
WATERTABLE: 195 feet

LOCATION: 200 West
COORDINATES: N41750/W75950

HRS Migration Score: 1.252

DESCRIPTION OF RELEASE:

Leak in process line from 105-TX to 108-TX tank.

DATE OF OCCURRENCE: November, 1954

DESCRIPTION OF WASTE:

Fission products - approximately 10 Ci with a maximum dose rate of 4.5 r/hr at 4 feet.

EXTENT OF CONTAMINATION:

An area within the 241-TX tank farm, north of the 241-TX diversion box.

REMEDIAL ACTION:

An area approximately 100 ft. by 125 ft. was covered with 1 ft. of clean soil.

REFERENCES:

Documents: ARH-2757 part 4, HW-60807
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-101

DIMENSIONS:

Length: 90 feet
Width: 65 feet
Depth: 3 inches
Area:

ELEVATION: 695 feet
WATERTABLE: 225 feet

LOCATION: 200 West
COORDINATES: N38730/W73050, N38550/W73230

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

An acid spill from the 221-U Building to the ground.

DATE OF OCCURRENCE: March, 1957

DESCRIPTION OF WASTE:

Reclaimed acid containing Sr-90 fission products to approximately 1 Ci.

EXTENT OF CONTAMINATION:

An area approximately 65 ft. by 90 ft. at the northeast end of the 221-U Bldg. from section R-1 to R-9.

REMEDIAL ACTION:

Area covered with 3 in. of sand and gravel.

REFERENCES:

Documents: RHO-CD-673
Photographs:
Drawings: H-2-44510

SITE ID NO.: UPR-200-W-102

DIMENSIONS:

Length: 50 feet
Width: 12 feet
Depth: 12 feet
Area:

ELEVATION: 718 feet
WATERTABLE: 260 feet

LOCATION: 200 West
COORDINATES: N43565/W73180, N43430/W73275

HRS Migration Score: 1.043

DESCRIPTION OF RELEASE:

Faulty vent lines from process tanks.

DATE OF OCCURRENCE: February, 1972

DESCRIPTION OF WASTE:

139 drums of soil containing approximately 72 grams of plutonium.

EXTENT OF CONTAMINATION:

Soil contamination in an area 50 feet x 12 feet x 12 feet.

REMEDIAL ACTION:

A total of 139 drums of soil was removed from the zone. The zone was posted for underground contamination.

REFERENCES:

Documents: RHO-CD-673
Photographs:
Drawings: H-2-44510

SITE ID NO.: UPR-200-W-103

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 676 feet
WATERTABLE: 195 feet

LOCATION: 200 West
COORDINATES: N39750/W76650

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

The 216-Z-18 crib line from 234-5 complex broke at location approximately six feet south and 12 feet west of southwest corner of 236-Z Building.

DATE OF OCCURRENCE: April, 1971

DESCRIPTION OF WASTE:

Pu 239 - approximately 10 grams. Gross alpha contamination found to be 76 million d/m per 100 cc of ground.

EXTENT OF CONTAMINATION:

Approximately 6 feet south and 12 feet west of the southwest corner of the 236-Z Building.

REMEDIAL ACTION:

Approximately one hundred 55-gallon barrels of contaminated soil were removed and buried in 200 West Area Pu "storage for recovery" burial ground. Much contamination still remains under six feet of clean soil.

REFERENCES:

Documents: RHO-CD-673
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-104

DIMENSIONS:

Length: 580 ft.
Width: 40 ft.
Depth: 10 ft.
Area:

ELEVATION: 648 feet
WATERTABLE: 185 feet

LOCATION: 200 West
COORDINATES: N36880/W77075, N37090/W76520

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Excavation of leach trench near the 216-U-10 pond showed some contamination present from an unknown source.

DATE OF OCCURRENCE: Mid 1950's

DESCRIPTION OF WASTE:

Low-Level beta-gamma and alpha activity on the ground surface in the bottom of the leach trench.

EXTENT OF CONTAMINATION:

Leach trench running northwest from the northeast corner of the 216-U-10 pond.

REMEDIAL ACTION:

No mention of any action concerning cleanup.

REFERENCES:

Documents: RHO-CD-673
Photographs:
Drawings: H-2-34762

SITE ID NO.: UPR-200-W-105

DIMENSIONS:

Length: 500 ft.
Width: 45 ft.
Depth: 15 ft.
Area:

ELEVATION: 651 feet
WATERTABLE: 181 feet

LOCATION: 200 West
COORDINATES: N36585/W76948, N36560/W76440

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Excavation of leach trench near the 216-U-10 pond showed some contamination present from an unknown source.

DATE OF OCCURRENCE: Mid 1950's

DESCRIPTION OF WASTE:

Low-level beta-gamma and alpha activity in the ground surface in the bottom of the leach trench. Readings to 3000 c/m in the west end of the trench.

EXTENT OF CONTAMINATION:

Leach trench running directly east from the center of the east side of the 216-U-10 pond.

REMEDIAL ACTION:

No mention of any action concerning cleanup.

REFERENCES:

Documents: RHO-CD-673
Photographs:
Drawings: H-2-34762

SITE ID NO.: UPR-200-W-106

DIMENSIONS:

Length: 400 ft.
Width: 25 ft.
Depth: 8 ft.
Area:

ELEVATION: 651 feet
WATERTABLE: 181 feet

LOCATION: 200 West

COORDINATES: N36320/W76810, N36290/W76415

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Excavation of leach trench near 216-U-10 pond showed some contamination present from an unknown source.

DATE OF OCCURRENCE: Mid 1950's

DESCRIPTION OF WASTE:

Low-Level beta-gamma and alpha activity on the ground surface in the bottom of the leach trench. Readings to 3000 c/m in the west end of the trench.

EXTENT OF CONTAMINATION:

Leach trench running east from east side of the 216-U-10 pond.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: RHO-CD-673
Photographs:
Drawings: H-234762

SITE ID NO.: UPR-200-W-107

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 648 feet
WATERTABLE: 182 feet

LOCATION: 200 West
COORDINATES: N36000/W77700

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Overflow zone or flood plain was exposed by receding waters of the 216-U-10 pond.

DATE OF OCCURRENCE: 1952 through 1957

DESCRIPTION OF WASTE:

Flood plain inundated with rising water from the 216-U-10 pond, which received waste water from the 216-U-14 laundry ditch, the 216-Z-11 ditch, and cooling water from the 401-SX Building condensers in the 241-SX tank farm. Beta/gamma on surface of ground to a maximum of 8000 c/m.

EXTENT OF CONTAMINATION:

The overflow zone at the 216-U-10 pond.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: RHO-CD-673
Photographs:
Drawings: H-2-34762

SITE ID NO.: UPR-200-W-108

DIMENSIONS:

Length:
Width:
Depth: 20 ft.
Area:

ELEVATION: 678 feet
WATERTABLE: 205 feet

LOCATION: 200 West
COORDINATES: N35850/W74450

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

During the tie-in of the 216-S-9 crib waste line to the new 216-S-23 crib, contaminated water was encountered coming from a break at the junction of the two crib lines. Further excavation disclosed a severe expansion buckle in the line at that point with a similar buckle within six feet up the line toward the 202-S Building.

DATE OF OCCURRENCE: January 8, 1969

DESCRIPTION OF WASTE:

Redox process condensate from the D-2 receiver tank in the 202-S Building. Unknown beta/gamma - dose rates at the bottom of the waste line read 40 R/hr.

EXTENT OF CONTAMINATION:

Approximately 200 ft. north of 13th Street at the south end of the 216-S-9 crib.

REMEDIAL ACTION:

The original intended tie-in was successfully made. Dose rates of 40 r/hr from the bottom of the waste line were shielded with lead to reduce dose rates to personnel to 400 mR/hr. Approximately 30 gallons of waste solution was discharged into a hole in the ground dug below the opening of the line. This hole is approximately 20 feet below ground surface at that location. There is no way of determining how long the line had been leaking or how much waste was discharged to the ground at that location.

REFERENCES:

Documents: RHO-CD-673

Photographs:

Drawings: H-2-34762

SITE ID NO.: UPR-200-W-109

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 674 feet
WATERTABLE: 202 feet

LOCATION: 200 West
COORDINATES: N35575/W74450

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

During the tie-in of the 216-S-9 crib waste line to the new 216-S-23 crib, contaminated water was encountered coming from a break at the junction of the two crib lines. Further excavation disclosed a severe expansion buckle in the line toward the 202-S Bldg.

DATE OF OCCURRENCE: January 24, 1969

DESCRIPTION OF WASTE:

Redox process condensate from the D-2 receiver tank in the 202-S Building. Acidic. Unknown beta/gamma. Dose rates at the surface were 450 mR/hr.

EXTENT OF CONTAMINATION:

An area just inside the east perimeter chain of the 218-W-9 site, south of 13th St. and north of the 216-S-7 crib.

REMEDIAL ACTION:

The original intended tie-in was successfully made. Dose rates of 40 R/hr from the bottom of the waste line were shielded with lead to reduce dose rates to personnel to 400 mR/hr. Approximately 30 gallons of waste solution was discharged into a hole in the ground dug below the opening of the line. This hole is approximately 20 feet below ground surface at that location. After repairing the buckled portions of the waste line, a pressure test indicated another leak in the line at some point upstream towards the 202-S Bldg. Further excavation and pressure testing finally determined a leak to be somewhere between the first discovered leak at the crib lines junction and the northwest corner of the Redox area fence.

SITE ID NO.: UPR-200-W-110

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 651 feet
WATERTABLE: 191 feet

LOCATION: 200 West
COORDINATES: N38850/W76125, N39275/W65950

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Excavated trench 15 feet deep- 425 ft. long, filled with 7 ft. of contaminated soil dirt.

DATE OF OCCURRENCE: 4/14/71 & 4/21/71

DESCRIPTION OF WASTE:

Americium and plutonium - maximum readings at the bottom of the ditch were 100,000 d/m.

EXTENT OF CONTAMINATION:

Adjacent and parallel to the head end of the 216-Z-19 ditch.

REMEDIAL ACTION:

Excavated trench 15 feet deep filled with 7 ft. of contaminated soil dirt and topped to grade level with 8 ft. of clean dirt overfill.

REFERENCES:

Documents: RHO-CD-673
Photographs:
Drawings: H-234762

SITE ID NO.: UPR-200-W-111

DIMENSIONS:

Length: 40 ft.
Width: 15 ft.
Depth: 10 ft.
Area:

ELEVATION: 668 feet
WATERTABLE: 190 feet

LOCATION: 200 West
COORDINATES: N37850/W75180

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Sludge from the bottom of the 207-U retention basin was placed in a trench, 10 ft. deep, 40 ft. long and 15 ft. wide.

DATE OF OCCURRENCE: Unknown

DESCRIPTION OF WASTE:

Approximately 27 cubic yards of sludge scraped from the bottom of the south retention basin of the 207-U site.

EXTENT OF CONTAMINATION:

South side of the 207-U South Retention Basin (within 10 feet of the concrete wall).

REMEDIAL ACTION:

The sludge was covered with 4 feet of clean dirt fill.

REFERENCES:

Documents: RHO-CD-673
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-112

DIMENSIONS:

Length: 40 ft.
Width: 15 ft.
Depth: 10 ft.
Area:

ELEVATION: 664 feet
WATERTABLE: 195 feet

LOCATION: 200 West
COORDINATES: N38150/W75180

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Sludge from the bottom of the 207-U retention basin was placed in a trench, 10 ft. deep, 40 ft. long and 15 ft. wide.

DATE OF OCCURRENCE: Unknown

DESCRIPTION OF WASTE:

Approximately 27 cubic yards of sludge scraped from the bottom of the north retention basin of the 207-U site.

EXTENT OF CONTAMINATION:

North side of the 207-U North Retention Basin (within 10 feet of the concrete wall).

REMEDIAL ACTION:

The sludge was covered with 4 feet of clean dirt fill.

REFERENCES:

Documents: RHO-CD-673
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-113

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 690 feet

WATERTABLE: 199 feet

LOCATION: 200 West

COORDINATES: N41450/W74900

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Radioactivity increased from soil surface downward, suggesting an old leak from a waste transfer pipeline. A nitric acid spill also contributed to ground surface contamination at this site.

DATE OF OCCURRENCE: Mid 1950's

DESCRIPTION OF WASTE:

Unknown beta/gamma.

EXTENT OF CONTAMINATION:

Approximately 700 ft. east of the 241-TX tank farm and north of the 214-TX-155 diversion box.

REMEDIAL ACTION:

The contaminated area was covered with clean gravel.

REFERENCES:

Documents: RHO-CD-673

Photographs:

Drawings: H-2-34762

SITE ID NO.: UPR-200-W-114

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 663 feet
WATERTABLE: 192 feet

LOCATION: 200 West
COORDINATES: N35690/W75589

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Leakage from the 241-SX tank farm and the 241-SX-151 and 241-SX-152 diversion boxes.

DATE OF OCCURRENCE: Unknown

DESCRIPTION OF WASTE:

Not identified in reference.

EXTENT OF CONTAMINATION:

An area east of the 241-SX tank farm.

REMEDIAL ACTION:

The amount of contamination was reduced through severe attempts to clean up the site, but residual contamination still remains.

REFERENCES:

Documents: Rockwell Radiation Survey Report Completed September, 1981
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-116

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 676 feet

WATERTABLE: 202 feet

LOCATION: 200 West
COORDINATES: N34465/W74600

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Exhaust from the 204-S Waste Storage Tank high efficiency filter provided spotty ground contamination.

DATE OF OCCURRENCE: Unknown

DESCRIPTION OF WASTE:

Not identified in reference.

EXTENT OF CONTAMINATION:

Approximately 300 feet north of the 202-S Building.

REMEDIAL ACTION:

No mention of any cleanup in reference.

REFERENCES:

Documents: Rockwell Radiation Survey Report Completed September, 1981

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-117

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 695 feet

WATERTABLE: 221 feet

LOCATION: 200 West
COORDINATES: 39235/W73725

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Contamination was spread from liquid and particulate matter dropping from railroad cars.

DATE OF OCCURRENCE: Mid 1950's

DESCRIPTION OF WASTE:

Not identified in reference.

EXTENT OF CONTAMINATION:

The ground around the railroad cut northeast of the 221-U Building.

REMEDIAL ACTION:

The site was designated as a radiation zone, but has since been released as contamination has decayed to background levels.

REFERENCES:

Documents: Rockwell Radiation Survey Reports

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-118

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 695 feet

WATERTABLE: 221 feet

LOCATION: 200 West
COORDINATES: N38575/W73490

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Leakage from the 211-U chemical tank farm.

DATE OF OCCURRENCE: 1960 - 1972

DESCRIPTION OF WASTE:

Reclaimed nitric acid.

EXTENT OF CONTAMINATION:

The railroad spur approximately 50 feet northwest of the 221-U Building.

REMEDIAL ACTION:

The site was designated as a radiation zone, but has since been released as contamination has decayed to background levels.

REFERENCES:

Documents: Rockwell Radiation Survey Report Completed September, 1981

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-123

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 674 feet

WATERTABLE: 202 feet

LOCATION: 200 West

COORDINATES: N34860/W74235

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Frozen discharge line.

DATE OF OCCURRENCE: January 18, 1979

DESCRIPTION OF WASTE:

19,300 gallons of radioactive liquid waste.

EXTENT OF CONTAMINATION:

The 204-S Unloading Facility Area.

REMEDIAL ACTION:

Contaminated ground beneath tank car was cleaned up.

REFERENCES:

Documents: Unusual Occurrence Report #79-11

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-124

DIMENSIONS:

Length: 1000 feet
Width: 30 feet
Depth:
Area:

ELEVATION: 670 feet
WATERTABLE: 204 feet

LOCATION: 200 West
COORDINATES: N32000/W72800

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

A dike break caused the contamination of an area near the REDOX Pond.

DATE OF OCCURRENCE: Not known

DESCRIPTION OF WASTE:

Not identified in reference.

EXTENT OF CONTAMINATION:

An area 30 ft. wide by 1000 ft. long that lies in a southwest direction from the dike.

REMEDIAL ACTION:

The ground was turned over with a bulldozer.

REFERENCES:

Documents: HW-60807
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-125

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 695 feet

WATERTABLE: 221 feet

LOCATION: 200 West
COORDINATES: N38270/W73900

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

A leak in the transfer line from the 288-U tank.

DATE OF OCCURRENCE: 1956

DESCRIPTION OF WASTE:

Fission products - approximately 1 Ci.

EXTENT OF CONTAMINATION:

A hole in the ground (which included interface crud, activated charcoal and diatomaceous earth) in U-Plant.

REMEDIAL ACTION:

Contamination was covered with clean soil.

REFERENCES:

Documents: ARH-2757 part 4

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-126

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 668 feet

WATERTABLE: 195 feet

LOCATION: 200 West

COORDINATES: N41645/W75575

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

A pipefitter removed old gaskets from the 153-TX diversion box (for replacement) and placed them in a plastic bag. Spotty contamination became airborne.

DATE OF OCCURRENCE: May 8, 1975

DESCRIPTION OF WASTE:

Readings to 2000 c/m on employee.

EXTENT OF CONTAMINATION:

The affected area was the transfer line from the 153-TX diversion box (which is routed to tank TX-101). However, only the employees involved in the incident were checked.

REMEDIAL ACTION:

The affected employees were decontaminated.

REFERENCES:

Documents: ARHCO Radiation Occurrence Report No. 2466

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-127

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 667 feet

WATERTABLE: 187 feet

LOCATION: 200 West

COORDINATES: N36700/W75575

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Pool of liquid was found on ground at east side of 242-S Bldg.

DATE OF OCCURRENCE: February 26, 1980

DESCRIPTION OF WASTE:

An unknown liquid.

EXTENT OF CONTAMINATION:

High radiation levels existed all around the building.

REMEDIAL ACTION:

Spill area was covered with clean dirt.

REFERENCES:

Documents: Radiation Occurrence Report

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-128

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 664 feet
WATERTABLE: 195 feet

LOCATION: 200 West
COORDINATES: N38300/W75550

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Employee cut through waste line in U-103 tank, resulting in contamination of 2 employees and surroundings.

DATE OF OCCURRENCE: January 8, 1971

DESCRIPTION OF WASTE:

Fission products.

EXTENT OF CONTAMINATION:

No details were mentioned in the report.

REMEDIAL ACTION:

No mention of any action concerning cleanup.

REFERENCES:

Documents: ARHCO Radiation Incident Telephone Report No. 2142
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-129

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 668 feet
WATERTABLE: 195 feet

LOCATION: 200 West
COORDINATES: N42000/W76000

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Caustic solution sprayed up from blank flange onto employee and pump pit.

DATE OF OCCURRENCE: January 7, 1971

DESCRIPTION OF WASTE:

Caustic solution. Readings to 20,000 on employee.

EXTENT OF CONTAMINATION:

Pump pit at TX-113 tank.

REMEDIAL ACTION:

Pump pit was hosed down.

REFERENCES:

Documents: ARHCO Radiation Incident Telephone Report No. 2141
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-130

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 673 feet
WATERTABLE: 197 feet

LOCATION: 200 West
COORDINATES: N41000/W76699

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

An excavation uncovered a leaking flange.

DATE OF OCCURRENCE: January 20, 1967

DESCRIPTION OF WASTE:

Alpha, beta, gamma readings to 40,000 d/m. 100 mrem/hr beta.
500 mrem/hr gamma.

EXTENT OF CONTAMINATION:

Soil around waste line on the east side of the 231-W-151 sump
near the 231-Z Building.

REMEDIAL ACTION:

Waste line was repaired and covered with 6 inches of clean soil.

REFERENCES:

Documents: BNW Radiation Incident Telephone Report 67-03
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-131

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 690 feet
WATERTABLE: 199 feet

LOCATION: 200 West
COORDINATES: N41380/W74720

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Contamination spread to the ground area around the 155-TX diversion box catch tank risers resulting from an attempt to neutralize acid waste in the tank.

DATE OF OCCURRENCE: March 13, 1953

DESCRIPTION OF WASTE:

Dilute acid waste solution.

EXTENT OF CONTAMINATION:

Ground contamination up to 25 rep/hr at two feet was observed over an area approximately five feet in diameter around the riser.

REMEDIAL ACTION:

The first ground contamination was partially removed, and the area papered over to prevent any further spread to adjacent ground areas.

REFERENCES:

Documents: HW-28125, HW-27475
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-132

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 668 feet

WATERTABLE: 190 feet

LOCATION: 200 West

COORDINATES: N38490/W76600

HRS Migration Score: 1.035

DESCRIPTION OF RELEASE:

An uncontrolled contamination spread occurred when uranium feed solution for the TBP process overflowed from the 241-UR-151 diversion box.

DATE OF OCCURRENCE: July 6, 1956

DESCRIPTION OF WASTE:

Uranium feed solution.

EXTENT OF CONTAMINATION:

An estimated 500 gallons of liquid overflowed the diversion box making two pools. One by the diversion box 6 ft. x 20 ft. and another around the electrical substation adjacent to the 271-UR control building, approximately 15 ft. x 30 ft.

REMEDIAL ACTION:

The area was evacuated and barricaded. A radiation survey was made and the contaminated area was backfilled.

REFERENCES:

Documents: HW-44537

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-133

DIMENSIONS:

Length:
Width:
Depth:
Area:

**ELEVATION:
WATERTABLE:**

LOCATION: 200 West
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Contaminated oil was squirted from a vacuum pump attached to a plutonium glove box while being changed.

DATE OF OCCURRENCE: March 8, 1974

DESCRIPTION OF WASTE:

Plutonium contaminated oil.

EXTENT OF CONTAMINATION:

One technician was contaminated about the head, face, and hands. A millwright was also contaminated but at lower levels. Both mens coveralls were contaminated.

REMEDIAL ACTION:

The laboratory room was evacuated and placed "on mask". Personnel decontamination procedures were initiated.

REFERENCES:

Documents: Occurrence Report #74-BNW-7
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-134

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 684 feet

WATERTABLE: 209 feet

LOCATION: 200 West
COORDINATES: N42000/W77600

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

A waste drum labeled "TRANSURANIC" was improperly buried in the 200-W burial garden. The handling and storage of this material did not meet standards.

DATE OF OCCURRENCE: October 27, 1975

DESCRIPTION OF WASTE:

Transuranic waste.

EXTENT OF CONTAMINATION:

None.

REMEDIAL ACTION:

ARHCO personnel were contacted to assure that the location of the burial was determined as accurately as possible and that no operations would be performed that might make retrieval of the drum more difficult.

REFERENCES:

Documents: Unusual Occurrence Report 38-75

Photographs:

Drawings:

SITE ID NO.: UPR-200-W-135

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 690 feet
WATERTABLE: 199 feet

LOCATION: 200 West
COORDINATES: N41380/W74720

HRS Migration Score: 1.198

DESCRIPTION OF RELEASE:

A cave-in about 2 feet in diameter approximately 150 feet northwest of the 155-TX diversion box, and a visible run-off path about 40 feet long.

DATE OF OCCURRENCE: April 5, 1954

DESCRIPTION OF WASTE:

Fission products.

EXTENT OF CONTAMINATION:

A dose rate of 5 rads/hr including 2.5 rads/hr at 3 feet was observed at the cave-in.

REMEDIAL ACTION:

Access roads into the area were barricaded until the contamination was covered. The contamination area was sealed and covered with earth.

REFERENCES:

Documents: HW-31517
Photographs:
Drawings:

SITE ID NO.: UPR-200-W-137

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 680 feet

WATERTABLE: 218 feet

LOCATION: 200 West

COORDINATES: N43129/W73540

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Not mentioned in the reference.

DATE OF OCCURRENCE: 1953-1960

DESCRIPTION OF WASTE:

Lab and sample wastes from 222-S Building.

EXTENT OF CONTAMINATION:

Underground compartment. Surface area is 250 feet square.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup.

REFERENCES:

Documents: RHO-CD-673

Photographs:

Drawings: H-2-51440, H-2-5170

SITE ID NO.: UPR-200-W-138

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 695 feet

WATERTABLE: 225 feet

LOCATION: 200 West
COORDINATES: N38670/W73090

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Solution overflowed to the 221-U Building vessel vent blower pit and then to ground through a french drain.

DATE OF OCCURRENCE: June, 1953

DESCRIPTION OF WASTE:

UNH solution from the 221-U Building, containing an estimated 300 pound of uranium.

EXTENT OF CONTAMINATION:

An area near the northwest corner of 221-U Bldg, near R-3 entrance.

REMEDIAL ACTION:

No mention of any action concerning cleanup.

REFERENCES:

Documents: RHO-CD-673

Photographs:

Drawings: H-2-44510

SITE ID NO.: UPR-200-W-139

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION:

WATERTABLE:

LOCATION: 200 West
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

No description of release in reference.

DATE OF OCCURRENCE: September, 1953

DESCRIPTION OF WASTE:

Unknown.

EXTENT OF CONTAMINATION:

A ditch from "U" swamp to "S" swamp.

REMEDIAL ACTION:

Ditch was covered in the spring of 1954 and posted with
"UNDERGROUND CONTAMINATION" signs.

Additional corrective action may have been provided.

REFERENCES:

Documents: HW-60807

Photographs:

Drawings:

300 AREA UNPLANNED-RELEASE SITES

The following sites are included in this section.

300 Area

UPR-300-1
UPR-300-2
UPR-300-4
UPR-300-5
UPR-300-7
UPR-300-8
UPR-300-9
UPR-300-10
UPR-300-11
UPR-300-12
UPR-300-13
UPR-300-14
UPR-300-15
UPR-300-17
UPR-300-18
UPR-300-19
UPR-300-20
UPR-300-21
UPR-300-22
UPR-300-23
UPR-300-24
UPR-300-25
UPR-300-26
UPR-300-27
UPR-300-28
UPR-300-29
UPR-300-30
UPR-300-31
UPR-300-32
UPR-300-33
UPR-300-34
UPR-300-35
UPR-300-36
UPR-300-37
UPR-300-38
UPR-300-39
UPR-300-40

SITE ID NO.: UPR-300-1

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 386 feet
WATERTABLE: 44 feet

LOCATION: 300 Area
COORDINATES: N54445/E15405

HRS Migration Score: 26.604

DESCRIPTION OF RELEASE:

A leak was discovered in the transfer line from retention basins to crib waste system. Crib waste was backed up and the bottom half of a short carbon steel transition piece was corroded away and contaminated waste leaked to the soil about 5 feet below grade.

DATE OF OCCURRENCE: December 9, 1969

DESCRIPTION OF WASTE:

300 Area process waste (transuranic fission products).

EXTENT OF CONTAMINATION:

The area between the 340 Building and the 307 retention basins to a depth of 5 feet. Extent of contamination is believed to be confined within a cylindrical section of earth approximately 25 feet deep and 12 feet in diameter.

REMEDIAL ACTION:

The top two feet of contaminated soil was placed in drums and removed to the 200 Area Burial Ground. Further removal of contaminated soil was considered a threat to adjacent structures.

REFERENCES:

Documents: PNL-MA-588, BNWL-CC-2617
Photographs:
Drawings: M-3600 Sheet 3

SITE ID NO.: UPR-300-2

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 386 feet

WATERTABLE: 44 feet

LOCATION: 300 Area
COORDINATES: N54445/E15405

HRS Migration Score: 18.268

DESCRIPTION OF RELEASE:

No description of release in reference.

DATE OF OCCURRENCE: January, 1954

DESCRIPTION OF WASTE:

Access area and trailer decontamination waste Cs-137
(approximately 10 mCi).

EXTENT OF CONTAMINATION:

10 to 20 feet north, east and south of the 340 Building.

REMEDIAL ACTION:

No mention of any action taken concerning cleanup. Contamination no longer present in 1978 during excavation for renovation.

REFERENCES:

Documents: Summary of Inventory of Hanford Radiation Waste Disposal Facilities

Photographs:

Drawings: M-3904, H-3-32708

SITE ID NO.: UPR-300-4

DIMENSIONS:

Length: 100 ft.
Width: 100 ft.
Depth: 20 ft.
Area:

ELEVATION: 386 feet
WATERTABLE: 44 feet

LOCATION: 300 Area
COORDINATES: N54280/E14200

HRS Migration Score: 22.121

DESCRIPTION OF RELEASE:

Leaks from equipment during the development of Redox and Purex processes.

DATE OF OCCURRENCE: 1945 to 1955

DESCRIPTION OF WASTE:

Uranium.

EXTENT OF CONTAMINATION:

The true extent is unknown but an area approximately 100 feet on a side and extending down at least 20 feet beneath and south of the 321 Building is suspect.

REMEDIAL ACTION:

Removal of contaminated soil was considered a threat to the 321 Building.

REFERENCES:

Documents: Personal Communication from R.B. Hall to T.J. McLaughlin
Photographs:
Drawings:

SITE ID NO.: UPR-300-5

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 400 feet
WATERTABLE: 44 feet

LOCATION: 300 Area
COORDINATES: N537000/E15250

HRS Migration Score: 14.662

DESCRIPTION OF RELEASE:

The 309 storage basin fill line was left open pouring water into the basin which eventually overflowed.

DATE OF OCCURRENCE: August 31, 1973

DESCRIPTION OF WASTE:

Low level radioactivity contaminated water overflowed from a storage basin.

EXTENT OF CONTAMINATION:

An area about four feet from the 309 Building and extending the full width of the truck ramp.

REMEDIAL ACTION:

Contaminated area was decontaminated. Asphalt cement was replaced over an area approximately 25 ft. by 50 ft.

REFERENCES:

Documents: Radiation Incidents 73-BNW-17
Photographs:
Drawings:

SITE ID NO.: UPR-300-7

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 386 feet
WATERTABLE: 44 feet

LOCATION: 300 Area
COORDINATES: N54780/E14500

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Approximately 850 gallons of fuel oil overflowed a full day tank behind the 384 Building when oil was transferred from the storage bunker.

DATE OF OCCURRENCE: August 7, 1972

DESCRIPTION OF WASTE:

No. 6 fuel oil.

EXTENT OF CONTAMINATION:

The spilled oil was retained in the concrete valve pits around the day tanks and in the soil between and around these two adjacent tanks. About 30 gallons of oil flowed with waste water in the trench to a sewer system which empties into a sump in the southeast basement of the building.

REMEDIAL ACTION:

A portable pump air tank truck recovered about 800 gallons of the oil. Conduits through the 384 Building foundation and the floor drain trench were flushed free of all oil with hot water.

REFERENCES:

Documents: HEDL Incident Report No. 33-72
Photographs:
Drawings:

SITE ID NO.: UPR-300-8

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 376 feet
WATERTABLE: 34 feet

LOCATION: 300 Area
COORDINATES: N57700/E15200

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

A defective valve in the storage tank steam sparge line allowed steam condensate to over-fill the caustic storage tank #2. The caustic storage tank then overflowed into the process sewer, causing the pH to rise to 11.95.

DATE OF OCCURRENCE: September 22, 1980

DESCRIPTION OF WASTE:

290 gallons of 50% sodium hydroxide solution.

EXTENT OF CONTAMINATION:

The waste originated at the Caustic Storage Tank in the 311 Tank Farm. The release was confined to the 300 area process trench.

REMEDIAL ACTION:

A second steam valve was closed, stopping overflow.

REFERENCES:

Documents: Unusual Event Report No.: S0-80-11
Photographs:
Drawings:

SITE ID NO.: UPR-300-9

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 386 feet
WATERTABLE: 44 feet

LOCATION: 300 Area
COORDINATES: N57700/E15200

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

847 gallons of nitric acid solution containing 121.5 Kg of depleted uranium drained from a storage tank in room 120 of the 306-N Building into the 300 Area process drainage system.

DATE OF OCCURRENCE: July 3, 1976

DESCRIPTION OF WASTE:

847 gallons of nitric acid solution containing 121.5 Kg of depleted uranium.

EXTENT OF CONTAMINATION:

The drainage system flows to the 300 Area North Process Trench. Groundwater sampling showed that the lost uranium and acid never reached the trench.

REMEDIAL ACTION:

The draining system was dye-tested. Florescein dye was added to the floor drain and showed that the system was free of leaks.

REFERENCES:

Documents: Occurrence Report 76-BNW-14
Photographs:
Drawings:

SITE ID NO.: UPR-300-10

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 388 feet
WATERTABLE: 44 feet

LOCATION: 300 Area
COORDINATES: N54025/E14670

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Leak testing of the Radioactive Liquid Waste sewer identified a leak between the west basement wall of room 32 in the 325 Building and the north foundation wall of room 202.

DATE OF OCCURRENCE: Discovered 1977

DESCRIPTION OF WASTE:

Waste from the Radioactive Liquid Waste sewer from the 325-B hot cells including waste from dissolution of highly radioactive samples including irradiated reactor fuels.

EXTENT OF CONTAMINATION:

Beneath the 325 Building.

REMEDIAL ACTION:

The line was capped and rerouted through the basement of the 325 Building.

REFERENCES:

Documents:
Photographs:
Drawings:

SITE ID NO.: UPR-300-11

DIMENSIONS:

Length: 2 feet
Width: 3 feet
Depth: 15 feet
Area: 6 square feet

ELEVATION: 380 feet
WATERTABLE: 38 feet

LOCATION: 300 Area
COORDINATES: N54453/E15404

HRS Migration Score: 17.427

DESCRIPTION OF RELEASE:

Leaking flanges in the Radioactive Liquid Waste line resulted in soil contamination near the 340 Building.

DATE OF OCCURRENCE: October 21, 1977

DESCRIPTION OF WASTE:

Radioactive liquid waste leaked from flanges connecting a tee to the sewer line. Fission products were found in soil samples but no alpha emitting nuclides were detected.

EXTENT OF CONTAMINATION:

About 22 cubic feet of soil in a column about 1 foot in diameter extending to approximately 23 feet below grade. At that depth, contamination spread laterally in an interface between undisturbed soil and backfill. Evidence of contamination from a separate event was also found, somewhat blurring contamination boundaries. Physical conditions prevented characterization of the second contaminated soil column.

REMEDIAL ACTION:

Soil removed during hand excavation to about 8 ft. below grade was placed in drums and buried in the 200 Area burial ground. About 90 percent of the contamination was removed, leaving approximately 1 curie in place.

REFERENCES:

Documents: Unusual Occurrence Report No. 35-77
Photographs:
Drawings:

SITE ID NO.: UPR-300-12

DIMENSIONS:

Length: 40 feet
Width: 1 feet
Depth:
Area:

ELEVATION: 387 feet
WATERTABLE: 44 feet

LOCATION: 300 Area
COORDINATES: N54050/E14945

HRS Migration Score: 62.882

DESCRIPTION OF RELEASE:

Discharge of waste when sewer valve was closed resulted in loss to basement floor and leakage to ground through a crack.

DATE OF OCCURRENCE: January 8, 1979

DESCRIPTION OF WASTE:

About 4000 gallons of radioactive rinse water overflow. The waste contained nitrate ions, promethium-147, fission product radionuclides and transuranic nuclides.

EXTENT OF CONTAMINATION:

Because the contamination was beneath the 325 Building, it was never fully characterized. The nitrate ion was detected in a nearby ground water monitoring well. However, the radionuclides were retained on the soil.

REMEDIAL ACTION:

Decontamination efforts on Room 50-A were completed. Removal of the contaminated soil was considered a threat to the 325 Building.

REFERENCES:

Documents: HEDL-Unusual Occurrence Report No.: 79-2
Photographs:
Drawings:

SITE ID NO.: UPR-300-13

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 386 feet

WATERTABLE: 44 feet

LOCATION: 300 Area
COORDINATES:

HRS Migration Score: 59.738

DESCRIPTION OF RELEASE:

Approximately 1300 gallons of spent acid leaked to the ground through a hole in a koroseal-lined mild steel receiving tank wall.

DATE OF OCCURRENCE: July 31, 1973

DESCRIPTION OF WASTE:

Spent process acid which included 4432 pounds of NO₃, 477 pounds of copper and 3 pounds (.0005 Ci) of uranium.

EXTENT OF CONTAMINATION:

Extent is not known.

REMEDIAL ACTION:

Caustic was added (1910 pounds) to neutralize the leak and the tank replaced.

REFERENCES:

Documents: Unusual Occurrence Report No.: 73-27
Photographs:
Drawings:

SITE ID NO.: UPR-300-14

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 386 feet

WATERTABLE: 44 feet

LOCATION: 300 Area
COORDINATES:

HRS Migration Score: 9.217

DESCRIPTION OF RELEASE:

A line break in fill tank No. 32 near the 306 Building caused the loss of 1,200 gallons of sulfuric acid to a limestone pit.

DATE OF OCCURRENCE: July 18, 1975

DESCRIPTION OF WASTE:

1,200 gallons of 93% sulfuric acid.

EXTENT OF CONTAMINATION:

The solution traveled through a concrete trench to a limestone pit designed to neutralize spilled acid.

REMEDIAL ACTION:

The flow of the acid from the elevated storage tank was stopped by closing the bottom valve on the tank and a "saddle pipe support" installed. The acid was neutralized forming calcium sulfate, carbon dioxide and water.

REFERENCES:

Documents: Unusual Occurrence Report No.: 75-25
Photographs:
Drawings:

SITE ID NO.: UPR-300-15

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 386 feet
WATERTABLE: 44 feet

LOCATION: 300 Area
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Uranium bearing acid storage tanks Nos. 3 and 4 overflowed the catch barrel and trickled over into the process sewer. Further inspection revealed that Tank No. 3 had discharged downward into Tank No. 4 through interconnected discharge lines. The discharge line for Tank No. 4 was wide open.

DATE OF OCCURRENCE: August 19, 1980

DESCRIPTION OF WASTE:

Uranium bearing acid.

EXTENT OF CONTAMINATION:

The acid spill was completely contained by the sewer system posing no risk to any individuals or the public.

REMEDIAL ACTION:

The system engineer rinsed the residual caustic out of the sewer with rinse water to help neutralize the acid. The defective valves were replaced.

REFERENCES:

Documents: Unusual Occurrence Report No. 80-26
Photographs:
Drawings:

SITE ID NO.: UPR-300-17

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 386 feet
WATERTABLE: 44 feet

LOCATION: 300 Area
COORDINATES:

HRS Migration Score: 22.594

DESCRIPTION OF RELEASE:

Rain caused uranium shavings in a garbage can to ignite. Can was inside a plastic-lined wooden burial box, which also caught on fire.

DATE OF OCCURRENCE: September 2, 1979

DESCRIPTION OF WASTE:

Readings to 15,000 c/m at 2 feet from burial box.

EXTENT OF CONTAMINATION:

Ground around burial box with a radius of approximately 10 feet.

REMEDIAL ACTION:

Ground and burial box was covered with plastic.

REFERENCES:

Documents: RHO Rockwell RITR No.: 2748, Radiation Occurrence Report No. 300-2-79
Photographs:
Drawings:

SITE ID NO.: UPR-300-18

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 386 feet

WATERTABLE: 44 feet

LOCATION: 300 Area

HRS Migration Score: ENS

COORDINATES:

DESCRIPTION OF RELEASE:

Solution squirted unexpectedly out of drain hole when drain plug was removed.

DATE OF OCCURRENCE: August 27, 1962

DESCRIPTION OF WASTE:

Low level cesium waste.

EXTENT OF CONTAMINATION:

Most of the liquid hit an employee. Amount of release to ground not mentioned in reference.

REMEDIAL ACTION:

Employee was decontaminated. No mention of any cleanup to the environment.

REFERENCES:

Documents: BNW Radiation Occurrence Report No.: 62-0-59

Photographs:

Drawings:

SITE ID NO.: UPR-300-19

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 376 feet
WATERTABLE: 44 feet

LOCATION: 300 Area
COORDINATES: N57700/E15200

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Two drums of incoming deoxidization chemicals were found to be leaking. After discovery, the floor was washed off, resulting in discharge to the process sewer. It appears that this washing solution resulted in a dissolution of ammonium bifluoride and sodium hydroxide in the 313 Bldg. floor trenches. The process sewer showed high nitrate, fluoride, and pH values as a result of this incident.

DATE OF OCCURRENCE: September 30, 1980

DESCRIPTION OF WASTE:

Nitric, sulfuric and chromic acid, apparently followed by ammonium bifluoride and sodium hydroxide discharge. Incoming acid used for copper component deoxidizing.

EXTENT OF CONTAMINATION:

The waste originated at 313 Bldg. Chemical Storage Area. The release was confined to the 300 area process trench.

REMEDIAL ACTION:

Spilled material was flushed into process sewer. Leaking drums were repackaged to prevent further release.

REFERENCES:

Documents: Unusual Event Report No.: S0-80-12
Photographs:
Drawings:

SITE ID NO.: UPR-300-20

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 376 feet

WATERTABLE: 44 feet

LOCATION: 300 Area

COORDINATES: N57700/E15200

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Overflow of a storage tank in the 313 Building resulted in an overflow of the catch barrel into the process sewer system.

DATE OF OCCURRENCE: August 19, 1980

DESCRIPTION OF WASTE:

Nitric and sulfuric acids with uranium in solution - quantity unknown.

EXTENT OF CONTAMINATION:

The waste originated at 313 Bldg. Uranium Recovery Area. The release was confined to the 300 Area process trench.

REMEDIAL ACTION:

None. Open valve was closed, stopping overflow.

REFERENCES:

Documents: Occurrence Report No.: 80-26

Photographs:

Drawings:

SITE ID NO.: UPR-300-21

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 376 feet

WATERTABLE: 34 feet

LOCATION: 300 Area
COORDINATES: N57700/E15200

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Nitric acid fill lines to tanks 13, 15 and 16 in the 333 Bldg. were removed. Apparently some residual nitric acid from these lines was discharged into the process sewer.

DATE OF OCCURRENCE: August 5, 1980

DESCRIPTION OF WASTE:

A small quantity of nitric acid.

EXTENT OF CONTAMINATION:

The waste originated in the 333 Bldg. Chemical Bay Area, but was confined to the 300 Area process trench.

REMEDIAL ACTION:

The tanks were removed and the fill lines were capped off.

REFERENCES:

Documents: Unusual Event Report No.: S0-80-8

Photographs:

Drawings:

SITE ID NO.: UPR-300-22

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 376 feet

WATERTABLE: 34 feet

LOCATION: 300 Area

COORDINATES: N57700/E15200

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Acid etch tanks #13 and 15 were leaking, resulting in acid discharge into the process sewer.

DATE OF OCCURRENCE: July 21 and 28, 1980

DESCRIPTION OF WASTE:

A small quantity of etch acids (nitric and hydroflouric).

EXTENT OF CONTAMINATION:

The waste originated in the 333 Bldg. Chemical Bay Area, but the leak was confined to the 300 Area process trench.

REMEDIAL ACTION:

None. Tanks were removed from service.

REFERENCES:

Documents: Unusual Event Report No.: S0-80-7

Photographs:

Drawings:

SITE ID NO.: UPR-300-23

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 376 feet

WATERTABLE: 34 feet

LOCATION: 300 Area

COORDINATES: N57700/E15200

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Leak inspection revealed two leaks in the nitric and sulfuric acid fill lines.

DATE OF OCCURRENCE: August, 1980

DESCRIPTION OF WASTE:

A small quantity of incoming etch acids (nitric and sulfuric).

EXTENT OF CONTAMINATION:

The waste originated at 333 Bldg. Trench Piping System and was confined to the 300 Area process trench.

REMEDIAL ACTION:

None. Leaks were repaired.

REFERENCES:

Documents: "Weekly Activities Report- 08-11-80", E.A. Weakly to W.G. Ruff

Photographs:

Drawings:

SITE ID NO.: UPR-300-24

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 376 feet

WATERTABLE: 34 feet

LOCATION: 300 Area

COORDINATES: N57700/E15200

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Leak inspection revealed two small drip leaks around newly installed etch tank.

DATE OF OCCURRENCE: August, 1980

DESCRIPTION OF WASTE:

A small quantity of waste etch acids (nitric and hydrofluoric).

EXTENT OF CONTAMINATION:

The waste originated at 333 Building Waste Acid System, but was confined to the 300 Area process trench.

REMEDIAL ACTION:

None. Leak was repaired at next available opportunity.

REFERENCES:

Documents: "Weekly Activities Report- 08-29-80", E.A. Weakly to W.G. Ruff

Photographs:

Drawings:

SITE ID NO.: UPR-300-25

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 376 feet

WATERTABLE: 34 feet

LOCATION: 300 Area

COORDINATES: N57700/E15200

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Leaks in steam coils in the uranium mill tank No. 32 caused acid to be siphoned in upon cooling of coils at nightly shut off. During startup in morning, steam discharged acid in coils into process sewer system. This situation was in evidence for several weeks.

DATE OF OCCURRENCE: February 15, 1980

DESCRIPTION OF WASTE:

A small quantity of uranium etch acids - nitric and sulfuric with uranium in solution.

EXTENT OF CONTAMINATION:

The waste originated at 333 Building - Uranium Mill Tank and was confined to the 300 Area process trench.

REMEDIAL ACTION:

No cleanup action. Leaking coils were repaired.

REFERENCES:

Documents: "Weekly Activities Report- 02-15-80", E.A. Weakly to A.P. Vinther

Photographs:

Drawings:

SITE ID NO.: UPR-300-26

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 376 feet
WATERTABLE: 34 feet

LOCATION: 300 Area
COORDINATES: N57700/E15200

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Condensate from steam heating line in the caustic storage tank caused overflow to process sewer.

DATE OF OCCURRENCE: January 12, 1980

DESCRIPTION OF WASTE:

A very small quantity of 50% sodium hydroxide (less than .1 lb NaOH).

EXTENT OF CONTAMINATION:

The contamination originated in Caustic Storage Tank in 311 Tank Farm and was routed to the 300 Area Process Trench for disposal.

REMEDIAL ACTION:

none. Steam line was shut off to stop discharge.

REFERENCES:

Documents: Unusual Event Report No.: S0-80-1
Photographs:
Drawings:

SITE ID NO.: UPR-300-27

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 376 feet

WATERTABLE: 34 feet

LOCATION: 300 Area
COORDINATES: N57700/E15200

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Failure of check valve in piping system resulted in discharge of a stream of uranium bearing acid into the process sewer system. Operator noticed leakage and immediately shut down the transfer pump, stopping the release.

DATE OF OCCURRENCE: October 30, 1979

DESCRIPTION OF WASTE:

An unknown quantity of uranium bearing acid waste containing nitric and sulfuric acids with uranium in solution.

EXTENT OF CONTAMINATION:

The contamination originated in the Uranium Bearing Acid Storage Tank in the 333 Building and was routed to the 300 Area Process Trench for disposal.

REMEDIAL ACTION:

Spilled solution was washed into process sewer system.

REFERENCES:

Documents: Unusual Event Report No.: S0-79-9

Photographs:

Drawings:

SITE ID NO.: UPR-300-28

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 376 feet

WATERTABLE: 34 feet

LOCATION: 300 Area
COORDINATES: N57700/E15200

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Open water fill line in the 333 Bldg. caused the process tank overflow into 334A storage tanks, which overflowed into containment pit. Pit then overflowed into process sewer system. Overflow to process sewer apparently began at 7:30 a.m. on June 3, and was discovered on the morning of June 5. Due to water input, overflow to process sewer was primarily water with some acid content.

DATE OF OCCURRENCE: June 2, 1978

DESCRIPTION OF WASTE:

18,780 gallons of solution (primarily water with some waste etch acids) containing hydrofluoric, nitric, and sulfuric acids with copper, uranium and zirconium in solution.

EXTENT OF CONTAMINATION:

The contamination originated in the Spent Waste Acid Storage Tanks 334A Building, and was routed to the 300 Area Process Trench for disposal.

REMEDIAL ACTION:

No cleanup action. Additional solution remaining in 334A pit was also drained to the process sewer.

REFERENCES:

Documents: Unusual Event Report No.: S0-78-7
Photographs:
Drawings:

SITE ID NO.: UPR-300-29

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 376 feet
WATERTABLE: 34 feet

LOCATION: 300 Area
COORDINATES: N57700/E15200

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Leak testing of system revealed three leaks in PVC chemical waste drain piping system. Additionally one leak was found in the incoming nitric acid supply line.

DATE OF OCCURRENCE: June, 1975

DESCRIPTION OF WASTE:

An unknown quantity of waste etch acids containing hydrofluoric, nitric, sulfuric and chromic acids with copper, uranium, and zirconium in solution.

EXTENT OF CONTAMINATION:

The contamination originated in the Waste Acid System in 333 Building and was routed to the 300 Area Process Trench for disposal.

REMEDIAL ACTION:

No cleanup action. Leaks were repaired.

REFERENCES:

Documents: "Monthly Report - June, 1975", E.A. Weakly to K.C. Bowles
Photographs:
Drawings:

SITE ID NO.: UPR-300-30

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 367 feet
WATERTABLE: 34 feet

LOCATION: 300 Area
COORDINATES: N57700/E15200

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

A chemical reaction occurred when a carbonate bearing solution was added to the waste acid solution. This caused foaming, which eventually caused an overflow of process tanks discharging to the process sewer.

DATE OF OCCURRENCE: January 30, 1975

DESCRIPTION OF WASTE:

Probably a small quantity of waste etch acids and spent film chemicals, containing hydrofluoric, nitric, sulfuric, and chromic acids.

EXTENT OF CONTAMINATION:

The contamination originated at the Waste Acid System in 333 Bldg. and was routed and disposed of in the 300 Area Process Pond.

REMEDIAL ACTION:

None.

REFERENCES:

Documents: Occurrence Report No.: 75-1
Photographs:
Drawings:

SITE ID NO.: UPR-300-31

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 376 feet
WATERTABLE: 34 feet

LOCATION: 300 Area
COORDINATES: N54800/E15800

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Inspection of pipe trench system revealed that extensive repairs were needed, apparently from previous spill in the system. Drain connections leading to the process sewer system were found broken in various locations, allowing possible ground discharge, rather than discharge into the process sewer.

DATE OF OCCURRENCE: October, 1974

DESCRIPTION OF WASTE:

An unknown quantity of uranium etch acids containing hydrofluoric, nitric, sulfuric and chromic acids with copper, uranium and zirconium in solution.

EXTENT OF CONTAMINATION:

The contamination originated in the pipe trench between 311 Tank Farm and 303-F Bldg. and was routed to the 301 Area Process Pond for disposal.

REMEDIAL ACTION:

No cleanup actions. Trench and piping repairs were completed.

REFERENCES:

Documents: UNI-652
Photographs:
Drawings:

SITE ID NO.: UPR-300-32

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 376 feet

WATERTABLE: 34 feet

LOCATION: 300 Area
COORDINATES: N54800/E15800

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Leak testing of system revealed one leak in piping, 3 leaking transfer pumps, and 5 leaks in the uranium mill tank.

DATE OF OCCURRENCE: August, 1974

DESCRIPTION OF WASTE:

An unknown quantity of uranium etch acids containing nitric and sulfuric acid with uranium in solution.

EXTENT OF CONTAMINATION:

The contamination originated at the 333 Bldg. Uranium Bearing Acid System and was routed to the 300 Area Process Pond for disposal.

REMEDIAL ACTION:

No cleanup action. Leaks were repaired.

REFERENCES:

Documents: "Monthly Record Report - August, 1974", E.A Weakly to H.F Tew
Photographs:
Drawings:

SITE ID NO.: UPR-300-33

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 376 feet
WATERTABLE: 34 feet

LOCATION: 300 Area
COORDINATES: N54800/E15800

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Leaking of PVC acid drain system showed 16 leaks. Additionally, 5 leaks were found in the incoming acid fill lines (presumably nitric or sulfuric acid system).

DATE OF OCCURRENCE: August, 1974

DESCRIPTION OF WASTE:

An unknown quantity of waste etch acids containing hydrofluoric, nitric, and chromic acids with copper, uranium and zirconium in solution.

EXTENT OF CONTAMINATION:

The contamination originated at 333 Bldg. Waste Acid System and was routed to the 300 Area Process Pond for disposal.

REMEDIAL ACTION:

No cleanup action. Leaks were repaired.

REFERENCES:

Documents: "Monthly Record Report - August, 1974", E.A. Weakly to H.F. Tew
Photographs:
Drawings:

SITE ID NO.: UPR-300-34

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 376 feet

WATERTABLE: 34 feet

LOCATION: 300 Area
COORDINATES: N54800/E15800

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Failure of limestone neutralization tank resulted in discharge to ground. As a consequence of the tank failure, routine operations involved discharging spent waste acids directly into the process sewer system. This practice continued until about January, 1975.

DATE OF OCCURRENCE: August, 1973

DESCRIPTION OF WASTE:

An unknown quantity of waste etch acids containing hydrofluoric, nitric, and chromic acids with copper, uranium, and zirconium in solution.

EXTENT OF CONTAMINATION:

The contamination originated at the 333 Bldg. Waste Acid System and was routed to the 300 Area Process Ponds for disposal.

REMEDIAL ACTION:

No cleanup action. NaOH discharges to the process ponds were made to maintain a neutral or caustic pH.

REFERENCES:

Documents: UNI-652
Photographs:
Drawings:

SITE ID NO.: UPR-300-35

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 376 feet

WATERTABLE: 34 feet

LOCATION: 300 Area
COORDINATES: N54800/E15800

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Leak discovered in overflow alarm system in uranium mill tank.
Also, uranium acid transfer pump discovered leaking.

DATE OF OCCURRENCE: June, 1973

DESCRIPTION OF WASTE:

An unknown quantity of uranium bearing etch acids containing
nitric and sulfuric acids with uranium in solution.

EXTENT OF CONTAMINATION:

The contamination originated at the 333 Bldg. Uranium Bearing
Acid Facility and was disposed of in the 300 Area Process Pond.

REMEDIAL ACTION:

No cleanup action. Leaking alarm system was removed. Leaking
pump was repaired or replaced.

REFERENCES:

Documents: "Monthly Record Report- June, 1973", E.A. Weakly to H.F. Tew
Photographs:
Drawings:

SITE ID NO.: UPR-300-36

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 376 feet
WATERTABLE: 34 feet

LOCATION: 300 Area
COORDINATES: N54800/E15800

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Leak testing of PVC acid drain system showed nine leaks. Additionally, four leaks were found in the incoming PVC nitric acid lines.

DATE OF OCCURRENCE: June, 1973

DESCRIPTION OF WASTE:

An unknown quantity of waste etch acids containing hydrofluoric, nitric, and chromic acids with copper, uranium, and zirconium in solution.

EXTENT OF CONTAMINATION:

The contamination originated in the 333 Bldg. Waste Acid System and was routed to the 300 Area Process Pond for disposal.

REMEDIAL ACTION:

No cleanup action. Leaks were repaired.

REFERENCES:

Documents: "Monthly Record Report - June, 1973", E.A. Weakly to H.F. Tew
Photographs:
Drawings:

SITE ID NO.: UPR-300-37

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 376 feet
WATERTABLE: 34 feet

LOCATION: 300 Area
COORDINATES: N54800/E15800

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Leak testing of PVC waste line revealed several large and numerous small leaks which discharged directly to the process sewer. During inspection it was also discovered that nitric-sulfuric-chromic acid stream was not connected to the neutralization tank, but instead was discharging directly to the process sewer.

DATE OF OCCURRENCE: January, 1972

DESCRIPTION OF WASTE:

An unknown quantity of waste etch acids containing hydrofluoric, nitric, and chromic acids with copper, uranium and zirconium in solution.

EXTENT OF CONTAMINATION:

The contamination originated in 333 Bldg. Waste Acid System and was routed to the 300 Area Process Pond for disposal.

REMEDIAL ACTION:

None. Large leaks repaired in February, 1972. Small Leaks were repaired in the summer of 1972. Nitric, sulfuric and chromic acid steam routed to discharge into neutralization tanks.

REFERENCES:

Documents: UNI-652
Photographs:
Drawings:

SITE ID NO.: UPR-300-38

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 376 feet
WATERTABLE: 34 feet

LOCATION: 300 Area
COORDINATES: N55300/E14400

HRS Migration Score: 62.882

DESCRIPTION OF RELEASE:

During repair of a floor in the 313 Building in the early 1970's solution was found running into a hallway from beneath the floor acid brick.

DATE OF OCCURRENCE: Approximately 1954

DESCRIPTION OF WASTE:

Uranium bearing acid waste containing nitric and sulfuric acid contaminated with uranium in solution, and neutralizing solution with 50% sodium hydroxide.

EXTENT OF CONTAMINATION:

The ground beneath the floor at the acid waste neutralization tank and uranium acid neutralization tank, 313 Building Uranium Recovery Area.

REMEDIAL ACTION:

During the floor repair, seeping material was collected and processed through uranium recovery operation. Removal of slab floor was not complete; apparently some material was removed.

REFERENCES:

Documents: Known by physical evidence
Photographs:
Drawings:

SITE ID NO.: UPR-300-39

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 376 feet
WATERTABLE: 34 feet

LOCATION: 300 Area
COORDINATES:

HRS Migration Score: 44.017

DESCRIPTION OF RELEASE:

Leaking caustic storage tanks in the 311 Tank Farm contaminated the soil around the tanks.

DATE OF OCCURRENCE: 1954

DESCRIPTION OF WASTE:

Incoming caustic solution containing 50% sodium hydroxide. Soil around tanks still exhibits high pH, necessitating use of chemical resistant suits when excavating in the area.

EXTENT OF CONTAMINATION:

The ground surrounding the caustic storage tanks in the 311 Tank Farm.

REMEDIAL ACTION:

None known.

REFERENCES:

Documents: Known by physical evidence
Photographs:
Drawings:

SITE ID NO.: UPR-300-40

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 376 feet
WATERTABLE: 34 feet

LOCATION: 300 Area
COORDINATES:

HRS Migration Score: 59.738

DESCRIPTION OF RELEASE:

In October 1974, it was discovered that drain connections between the pipe trench, the 303-F Building, and the process sewer were broken. The bottom of the trench was severely eroded, indicating that a spill had occurred. The trench floor remains contaminated to this date. Total volume of spilled material is unknown, however evidence of uranium contamination of the soil has been found.

DATE OF OCCURRENCE: 1961

DESCRIPTION OF WASTE:

Uranium bearing acid waste containing nitric and sulfuric acid with uranium in solution.

EXTENT OF CONTAMINATION:

Ground around pipe trench between 311 Tank Farm and 303-F Building.

REMEDIAL ACTION:

Piping connections were repaired, as was trench floor. Removal of contaminated soil was apparently not pursued.

REFERENCES:

Documents: UNI-652
Photographs:
Drawings:

600 AREA UNPLANNED-RELEASE SITES

The following sites are included in this section.

600 Area

UPR-600-1
UPR-600-2
UPR-600-3
UPR-600-4
UPR-600-5
UPR-600-6
UPR-600-7
UPR-600-8
UPR-600-9
UPR-600-10
UPR-600-11
UPR-600-12
UPR-600-14
UPR-600-15
UPR-600-16

SITE ID NO.: UPR-600-1

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 430 feet

WATERTABLE: 60 feet

LOCATION: 600 Area

HRS Migration Score: 13.231

COORDINATES: S6200/E2883, S5818/E2592, S5530/E2982, S5982/E3329

DESCRIPTION OF RELEASE:

A fire in the 618-10 Burial Ground, destroying all flammable material in the trench and contaminated the environment in the immediate vicinity.

DATE OF OCCURRENCE: July 4, 1961

DESCRIPTION OF WASTE:

Reading > 100,000 c/m for most particles, with up to 20 particles per 100 square feet at a distance of 50 to 75 feet from the burial ground fence and extending out for 100 yards. At 300 yards outside the fence, 3 particles per 100 square feet were detected ranging from 4,000 to 20,000 c/m.

EXTENT OF CONTAMINATION:

An area extending to 300 yards outside burial ground fence.

REMEDIAL ACTION:

The area was covered with dirt to preclude further loss of contaminated material.

REFERENCES:

Documents: Radiation Occurrence Report No.: 61-0-22

Photographs:

Drawings:

SITE ID NO.: UPR-600-2

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 430 feet
WATERTABLE: 60 feet

LOCATION: 600 Area

HRS Migration Score: 17.069

COORDINATES: S6200/E2883, S5818/E2592, S5530/E2982, S5982/E3329

DESCRIPTION OF RELEASE:

Spotty contamination occurred during a routine milk bucket at the 618-10 Burial Ground.

DATE OF OCCURRENCE: February 14, 1963

DESCRIPTION OF WASTE:

Airborne contamination resulting in readings to 80,000 c/m.

EXTENT OF CONTAMINATION:

An area of radius 5 feet around barrel where bucket was placed, and an area in front of the burial ground gate. Also a spot of contamination in front of powerhouse.

REMEDIAL ACTION:

No mention of any action concerning cleanup.

REFERENCES:

Documents: Radiation Incident Telephone Report date February 15, 1963.
Photographs:
Drawings:

SITE ID NO.: UPR-600-3

DIMENSIONS:

Length:

Width:

Depth:

Area: 600 square feet

ELEVATION: 430 feet

WATERTABLE: 60 feet

LOCATION: 600 Area

HRS Migration Score: 16.171

COORDINATES: S6200/E2883, S5818/E2592, S5530/E2982, S5982/E3329

DESCRIPTION OF RELEASE:

An improper container was used to dispose of waste into the 618-10 Burial Ground. The lid of the container came off causing dust to puff out of barrel and onto the ground.

DATE OF OCCURRENCE: September 4, 1963

DESCRIPTION OF WASTE:

Readings to 400 mrad/hr at 2 inches.

EXTENT OF CONTAMINATION:

600 square feet around the barrel.

REMEDIAL ACTION:

Contaminated ground area was washed down by the 300 Area Fire Department.

REFERENCES:

Documents: Radiation Occurrence Report No.: 63-0-27

Photographs:

Drawings:

SITE ID NO.: UPR-600-4

DIMENSIONS:

Length:

Width:

Depth:

Area: 1000 square feet

ELEVATION: 430 feet

WATERTABLE: 50 feet

LOCATION: 600 Area

HRS Migration Score: ENS

COORDINATES: N12103/W2561, N12103/W3561, N12478/W2561, N12478/W3561

DESCRIPTION OF RELEASE:

Radioactive material blew out of waste can as it was lowered into the 618-11 Burial Ground.

DATE OF OCCURRENCE: March 6, 1964

DESCRIPTION OF WASTE:

Waste from High Level Radiochemistry Facility. Readings to 10,000 c/m.

EXTENT OF CONTAMINATION:

An area covering 1000 square feet in the burial ground.

REMEDIAL ACTION:

No mention of any cleanup in the report.

REFERENCES:

Documents: Radiation Occurrence Report No.: 64-8

Photographs:

Drawings:

SITE ID NO.: UPR-600-5

DIMENSIONS:

Length:

Width:

Depth:

Area: 1800 square feet

ELEVATION: 430 feet

WATERTABLE: 50 feet

LOCATION: 600 Area

HRS Migration Score: ENS

COORDINATES: N12103/W2561, N12103/W3561, N12478/W2561, N12478/W3561

DESCRIPTION OF RELEASE:

Employees were contaminated during routine burial operations at the 618-11 Burial Ground when a fine white powder escaped out of the truck chute spilling onto the ground.

DATE OF OCCURRENCE: May 18, 1964

DESCRIPTION OF WASTE:

Airborne contamination resulting in readings to 500 c/m beta/gamma of gross fission products.

EXTENT OF CONTAMINATION:

The contamination covered an area of approximately 1800 square feet.

REMEDIAL ACTION:

The area was covered with a clean layer of soil.

REFERENCES:

Documents: Radiation Occurrence Report No.: 64-15

Photographs:

Drawings:

SITE ID NO.: UPR-600-6

DIMENSIONS:

Length:

Width:

Depth:

Area: 1400 square feet

ELEVATION: 430 feet

WATERTABLE: 50 feet

LOCATION: 600 Area

HRS Migration Score: ENS

COORDINATES: N12103/W2561, N12103/W3561, N12478/W2561, N12478/W3561

DESCRIPTION OF RELEASE:

Winds of 32 mph with gusts up to 44 mph blew waste from truck over an employee and onto ground causing spotty contamination at the 618-11 Burial Ground.

DATE OF OCCURRENCE: February 8, 1965

DESCRIPTION OF WASTE:

Ru-103 and Zr-Nb95. Readings from 100 c/m to 200 mrad/hr.

EXTENT OF CONTAMINATION:

An area of 1400 square feet.

REMEDIAL ACTION:

No mention of any cleanup in the report.

REFERENCES:

Documents: BNW ROR 65-05

Photographs:

Drawings:

SITE ID NO.: UPR-600-7

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION: 430 feet
WATERTABLE: 50 feet

LOCATION: 600 Area

HRS Migration Score: ENS

COORDINATES: N12103/W2561, N12103/W3561, N12478/W2561, N12478/W3561

DESCRIPTION OF RELEASE:

An employee dropped a box containing CWS filter from 327 Bldg. basement off back of a truck at the 618-11 Burial Ground. Dust came out of the box, and caused spotty contamination in the immediate vicinity.

DATE OF OCCURRENCE: March 1, 1965

DESCRIPTION OF WASTE:

Dust from a highly contaminated filter from the 327 Building.

EXTENT OF CONTAMINATION:

Spots in the 618-11 Burial Ground.

REMEDIAL ACTION:

No mention of any action concerning cleanup.

REFERENCES:

Documents: Radiation Occurrence Report No.: 65-08
Photographs:
Drawings:

SITE ID NO.: UPR-600-8

DIMENSIONS:

Length:

Width:

Depth:

Area: 30 square feet

ELEVATION: 430 feet

WATERTABLE: 50 feet

LOCATION: 600 Area

HRS Migration Score: ENS

COORDINATES: N12103/W2561, N12103/W3561, N12478/W2561, N12478/W3561

DESCRIPTION OF RELEASE:

Release occurred during routine burial operations causing either air backup from burial tank chute or loose contamination blown from release gate of cask as it was operated.

DATE OF OCCURRENCE: April 7, 1967

DESCRIPTION OF WASTE:

Airborne contamination resulting in readings to 100,000 c/m.

EXTENT OF CONTAMINATION:

An area of 30 square feet in the 618-11 Burial Ground.

REMEDIAL ACTION:

The area was covered with 2 to 3 inches of clean gravel.

REFERENCES:

Documents: Radiation Occurrence Report No.: 67-21

Photographs:

Drawings:

SITE ID NO.: UPR-600-9

DIMENSIONS:

Length: 750 feet
Width: 450 feet
Depth:
Area:

ELEVATION: 430 feet
WATERTABLE: 50 feet

LOCATION: 600 Area

HRS Migration Score: ENS

COORDINATES: N12103/W2561, N12103/W3561, N12478/W2561, N12478/W3561

DESCRIPTION OF RELEASE:

During routine burial operations in the 618-11 Burial Ground, a piece of waste became wedged in the truck chute causing an airborne release of contamination.

DATE OF OCCURRENCE: April 14, 1967

DESCRIPTION OF WASTE:

Corroded aluminum rupture cans and pieces of an N reactor safety rod, readings to 450 mrad/hr at the chute.

EXTENT OF CONTAMINATION:

A fan-shaped area 750 feet by 450 feet extending northeast from the dump chute.

REMEDIAL ACTION:

The area inside the fence was covered with 3-6 inches of gravel. Outside the fence, the top layer was bladed and covered with clean soil.

REFERENCES:

Documents: Radiation Occurrence Report No.: 67-22
Photographs:
Drawings:

SITE ID NO.: UPR-600-10

DIMENSIONS: ELEVATION: 430 feet
Length: WATERTABLE: 50 feet
Width:
Depth:
Area: 400 square feet

LOCATION: 600 Area HRS Migration Score: 11.878
COORDINATES: N12103/W2561, N12103/W3561, N12478/W2561, N12478/W3561

DESCRIPTION OF RELEASE:

During a routine burial at the 618-11 Burial Ground, a container was externally contaminated with a significant quantity of loose highly radioactive material causing ground contamination.

DATE OF OCCURRENCE: September 30, 1963

DESCRIPTION OF WASTE:

Airborne contamination resulting in readings to 1.4 rads/hr at 3 inches of high level beta/gamma.

EXTENT OF CONTAMINATION:

An area of 400 square feet around barrel 327-2 at the 618-11 Burial Ground.

REMEDIAL ACTION:

The contaminated ground area was washed down with 6000 gallons of water to control blowing. The most highly contaminated earth was shoveled into waste barrels and the whole area was covered with several inches of clean sand.

REFERENCES:

Documents: Radiation Occurrence Report No.: 63-0-29
Photographs:
Drawings:

SITE ID NO.: UPR-600-11

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION: 430 feet

WATERTABLE: 50 feet

LOCATION: 600 Area

COORDINATES: To be determined

HRS Migration Score: 20.445

DESCRIPTION OF RELEASE:

Workers excavated 100 cubic yards of berm material and buried it in a clean landfill (J.A. Jones Construction Pit #1), before contamination was detected. Contamination believed to have originated from discarded asphalt blacktop rubble, at the south end of the berm.

DATE OF OCCURRENCE: May 29, 1980

DESCRIPTION OF WASTE:

Beta/gamma. Readings to 4000 c/m in dirt.

EXTENT OF CONTAMINATION:

100 cubic yards of dirt in previously clean landfill, and 305-B berm.

REMEDIAL ACTION:

The contaminated soil was initially removed from the contaminated berm and placed in the J.A. Jones Construction Pit #1. The soil was then re-excavated from the pit and placed in one of the 200 Area burial grounds. The pit is now free of any radiological constituents.

REFERENCES:

Documents: Radiation Occurrence Report No.: 80-10

Photographs:

Drawings:

SITE ID NO.: UPR-600-12

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION:

WATERTABLE:

LOCATION: 600 Area

HRS Migration Score: 5.445

COORDINATES:

DESCRIPTION OF RELEASE:

A tractor trailer overturned spilling UNH solution on the 200 East hill.

DATE OF OCCURRENCE: December 30, 1954

DESCRIPTION OF WASTE:

UNH solution - less than 10 nCi/g of soil. Maximum dose rate at the surface were 60 mrad/hr.

EXTENT OF CONTAMINATION:

A portion of Route 4-S on the 200 East hill. The area was removed from radiation zone status in March, 1971.

REMEDIAL ACTION:

A portion of the contamination was recovered while the rest was washed off the road and covered with dirt. The road was resurfaced and the area posted.

REFERENCES:

Documents: ARH-2015, HW-54636, HW-60807

Photographs:

Drawings:

SITE ID NO.: UPR-616-14

DIMENSIONS:

Length:
Width:
Depth:
Area:

ELEVATION:
WATERTABLE:

LOCATION: 600 Area
COORDINATES:

HRS Migration Score: ENS

DESCRIPTION OF RELEASE:

Propane gas was released form a leaking safety relief valve on a propane gas tank.

DATE OF OCCURRENCE: August 19, 1973

DESCRIPTION OF WASTE:

Propane gas.

EXTENT OF CONTAMINATION:

After surveillence over the area, the tank gauge indicated 50% full. Prevailing winds from the southeast at 10 mph carried the gas away from the buildings.

REMEDIAL ACTION:

The trailer supply line was disconnected from the tank and the remaining gas bled off.

REFERENCES:

Documents: BNW Incident Report #73-BN-13
Photographs:
Drawings:

SITE ID NO.: UPR-600-15

DIMENSIONS:

Length: 60 feet
Width: 7 feet
Depth: 1 foot
Area:

ELEVATION: 400 feet
WATERTABLE: 58 feet

LOCATION: 600 Area

HRS Migration Score: 26.123

COORDINATES: N57832/E14546 (southwest corner)

DESCRIPTION OF RELEASE:

Depleted uranium fuel elements improperly discarded at the 618-4 Burial Ground.

DATE OF OCCURRENCE: September 20, 1979

DESCRIPTION OF WASTE:

Fuel elements (0.15% U-235). Dose rate of 4,000 mR/hr on the surface.

EXTENT OF CONTAMINATION:

An area approximately 7 feet by 60 feet running north and south outside the boundry fence of the 618-4 Burial Ground.

REMEDIAL ACTION:

The 20 elements and some slightly contaminated soil were placed in plastic bags and delivered to UNC Fuels Operating for analysis. They were to be buried in the 218-W-3A Mixed Fission Product Trench by Nov. 15, 1979.

REFERENCES:

Documents: Unusual Occurrence Report No.: 79-96
Photographs:
Drawings:

SITE ID NO.: UPR-600-16

DIMENSIONS:

Length: 180 feet
Width: 100 feet
Depth: 1 foot
Area: 18000 square feet

ELEVATION: 393 feet
WATERTABLE: 35 feet

LOCATION: 600 Area
COORDINATES: N63343/W25821

HRS Migration Score: 16.251

DESCRIPTION OF RELEASE:

A fire on December 4, 1951, spread gross plutonium contamination over an area 100 feet x 180 feet in the vicinity of the 120 Building (P-11 Facility).

DATE OF OCCURRENCE: December 4, 1951

DESCRIPTION OF WASTE:

An estimated 1-4 grams of plutonium.

EXTENT OF CONTAMINATION:

An area 100 feet x 180 feet in the vicinity of the 120 Building.

REMEDIAL ACTION:

The contaminated area was covered with 2 to 2 1/2 feet of clean soil and gravel and enclosed by a wire fence posted with radiation signs. In 1974, the entire site was exhumed and is presently free of any chemicals and radioactivity, and has since been released from radiation zone status.

REFERENCES:

Documents: HW-22936
Photographs:
Drawings:

3000 AREA UNPLANNED-RELEASE SITES

The following site is included in this section.

3000 Area

UPR-3000-1

SITE ID NO.: UPR-3000-1

DIMENSIONS:

Length:

Width:

Depth:

Area:

ELEVATION:

WATERTABLE:

LOCATION: 3000 Area
COORDINATES:

HRS Migration Score: 4.400

DESCRIPTION OF RELEASE:

A technician disposed of 1650 ml of waste Cs-134 solution into a cold drain which empties into the Richland city sewer system.

DATE OF OCCURRENCE: February 26, 1973

DESCRIPTION OF WASTE:

.000002 Ci of Cs-134 in 1650 ml of solution.

EXTENT OF CONTAMINATION:

The solution was disposed in the sink. The sink drain and trap were surveyed. No radioactivity was found.

REMEDIAL ACTION:

None known.

REFERENCES:

Documents: Unusual Occurrence Report No. 73-BNW-8

Photographs:

Drawings:

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