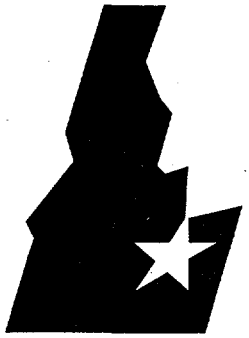

Idaho National Engineering Laboratory

INEL-96/0191 (2nd QTR)

September 1996

Idaho National Engineering Laboratory Radiological Control Performance Indicator Report

Second Quarter - Calendar Year 1996

Date Published
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LOCKHEED MARTIN

INEL-96/0191 (2nd QTR)

Idaho National Engineering Laboratory
Radiological Control Performance Indicator Report

Second Quarter
Calendar Year 1996

Published September 1996

Idaho National Engineering Laboratory
Radiological Control
Lockheed Idaho Technologies Company
Idaho Falls, Idaho 83415

Prepared for the
U.S. Department of Energy
Assistant Secretary for Environment, Safety, and Health
Under DOE Idaho Operations Office
Contract DE-AC07-94ID13223

Document Title: Idaho National Engineering Laboratory Radiological Control Performance Indicator Report

Prepared By:

F. L. Hinckley
Staff Engineer/Scientist

9-26-96
Date

S. B. Aitken
Engineer/Scientist

9-26-96
Date

Approved By:

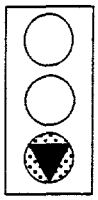
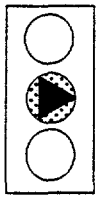
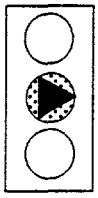
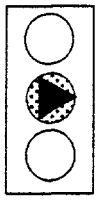
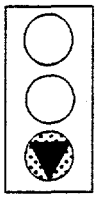
G. L. Courtney
Manager, Radiological Control

9/26/96
Date

DISCLAIMER

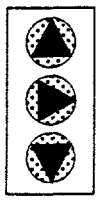
TABLE OF CONTENTS

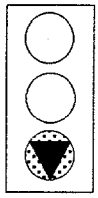
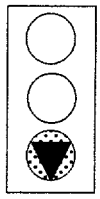
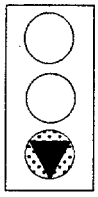
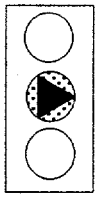
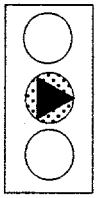
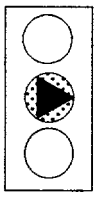
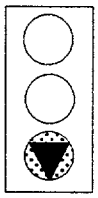
INEL Radiological Control Performance Indicator Overview
Second Quarter 1996

		Actual	Goal or Average
Collective Year-to-Date Penetrating Radiation Dose		86.3 person-rem	174 person-rem (Goal)
Year-to-Date Average Worker Dose		0.110 rem	0.179 rem (3 Year Average)
Maximum Year-to-Date Penetrating Dose to a Worker		1.294 rem	1.500 rem (Goal)
Maximum Year-to-Date Neutron Dose to a Worker		0.093 rem	0.125 rem (3 Year Average)
Year-to-Date Skin Contaminations		8	26 (3 Year Average)

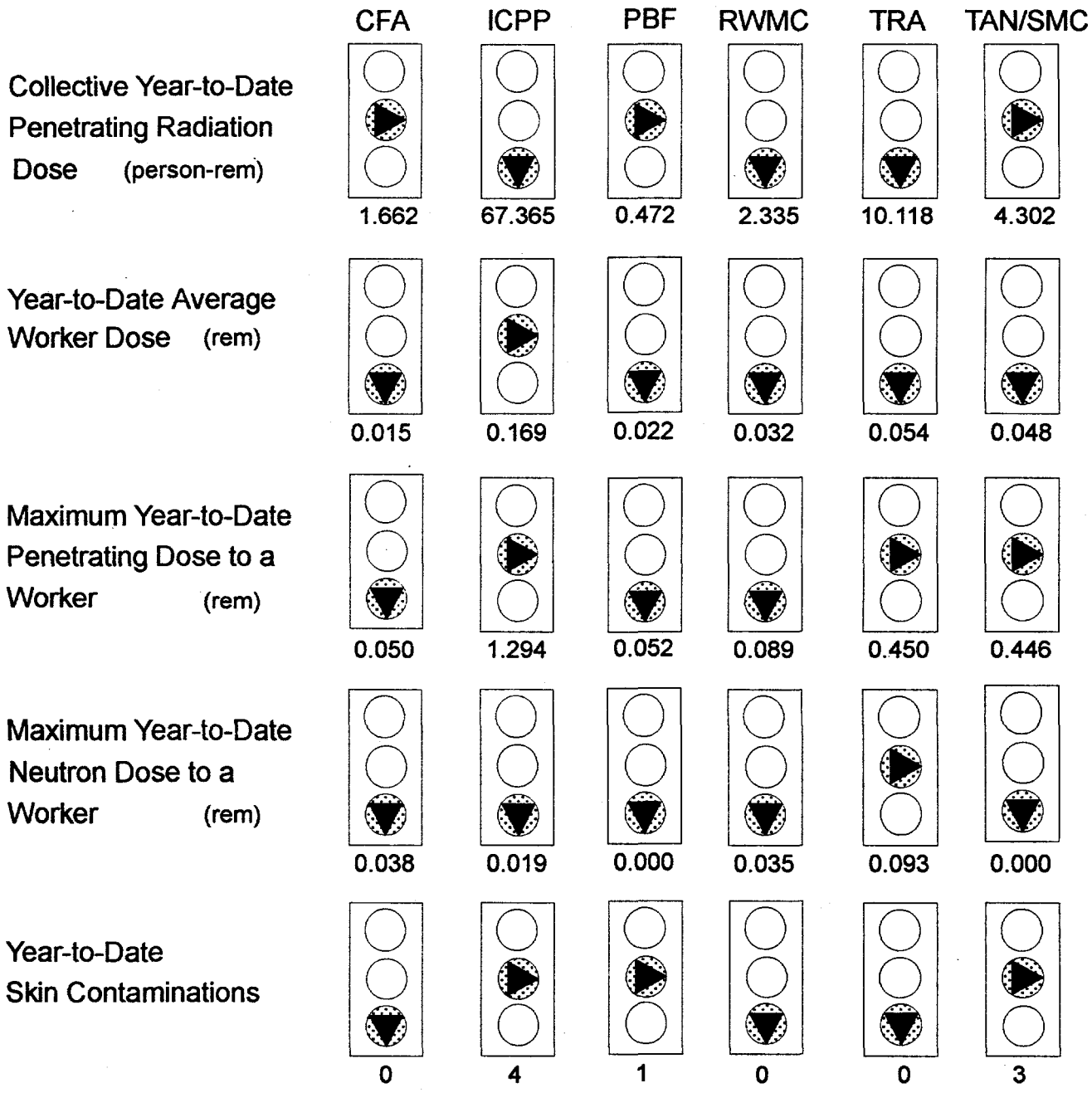
Legend

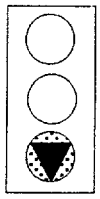
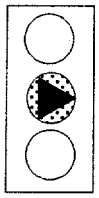
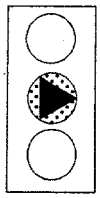
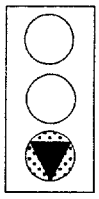
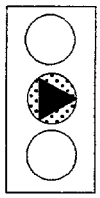
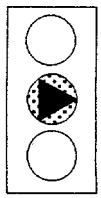
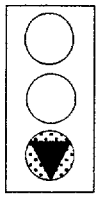
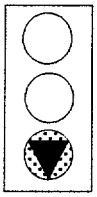
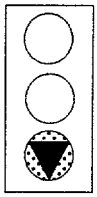
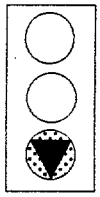
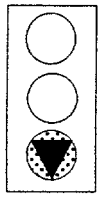
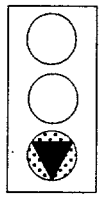
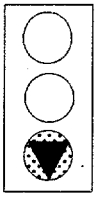
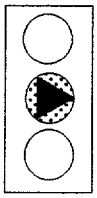
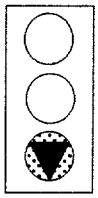
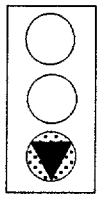
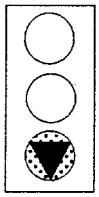
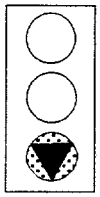
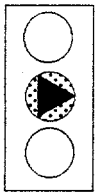
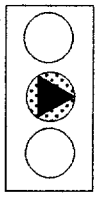
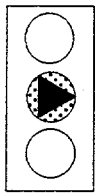
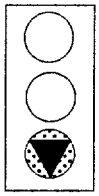
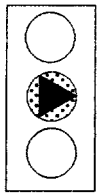
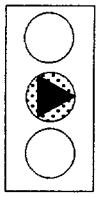
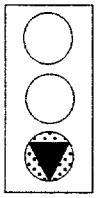
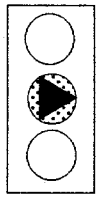
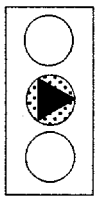
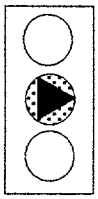
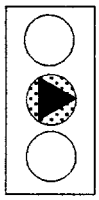
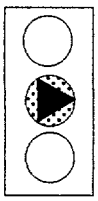
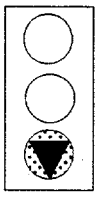
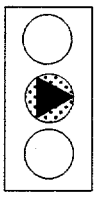
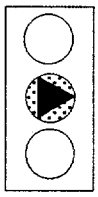
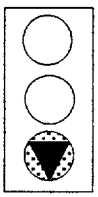
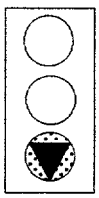
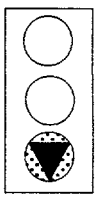
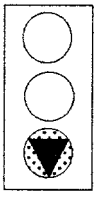
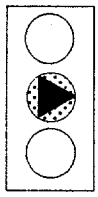
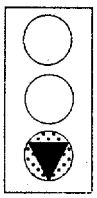
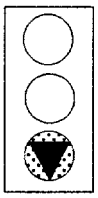
Needs Attention
OK
Good



		Actual	Goal or Average
Year-to-Date Clothing Contaminations		25	70 (3 Year Average)
Year-to-Date Airborne Events		0	2 (3 Year Average)
Year-to-Date Radioactive Material Intakes		1	11 (3 Year Average)
Contamination Area		193,667 ft^2	203,700 ft^2 (3 Year Average)
High Contamination Area		297,663 ft^2	301,475 ft^2 (3 Year Average)
Airborne Radioactivity Area		85,084 ft^2	81,633 ft^2 (3 Year Average)
Year-To-Date Spills		17	150 (3 Year Average)

INEL Facility Radiological Control Performance Indicator Overview
Second Quarter 1996



	CFA	ICPP	PBF	RWMC	TRA	TAN/SMC
Year-to-Date Clothing Contaminations	 0	 17	 2	 0	 4	 2
Year-to-Date Airborne Events	 0	 0	 0	 0	 0	 0
Year-to-Date Radioactive Material Intakes	 0	 1	 0	 0	 0	 0
Contamination Area - ft^2	 14,105	 65,419	 7,378	 0	 52,516	 54,249
High Contamination Area - ft^2	 372	 251,961	 2,288	 29,525	 1,991	 11,526
Airborne Radioactivity Area - ft^2	 372	 82,712	 2,000	 0	 0	 0
Year-to-Date Spills	 0	 17	 0	 0	0	0

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Executive Summary
Radiological Control Performance Indicator Report

Second Quarter 1996

This document provides a report and analysis of the Radiological Control Program through the second quarter of calendar year 1996 (CY-1996) at the Idaho National Engineering Laboratory (INEL) under the direction of Lockheed Martin Idaho Technologies Company (LMITCO). The Radiological Control Performance Indicator Report is provided in accordance with Article 133 of the INEL Radiological Control Manual.

- Total INEL penetrating radiation exposure through the end of the second quarter was 86.325 person-rem (p-rem).
- Average penetrating radiation dose to an INEL radiation worker through the end of the second quarter was 0.110 rem.
- Maximum penetrating radiation dose to an INEL worker through the second quarter was 1.294 rem.
- Maximum neutron radiation dose to an INEL worker through the end of the second quarter was 0.093 rem.
- The total number of INEL skin contaminations through the second quarter was eight, seven of which resulted in Occurrence Reports (OR).
- The total number of INEL clothing contaminations through the end of the second quarter was twenty-five, of which fifteen resulted in ORs.
- Total number of airborne radioactivity events exceeding 10% Derived Air Concentrations (DAC) through the end of the second quarter was zero.
- Total number of year-to-date radioactive material intakes assigned a dose of 10 mrem or more was one. No intakes met Department of Energy (DOE) Order 5000.3B reportable criteria.
- Total INEL Contamination Area was 193,667 square feet. Total High Contamination Area was 297,663 square feet, and total Airborne Radioactivity Area was 85,084 square feet.
- The total number of radioactive spills was seventeen, of which four resulted in Occurrence Reports.

Radiological Control Performance Indicator Charter

The INEL Radiological Control Performance Indicator Report is provided quarterly, in accordance with Article 133 of the INEL Radiological Control Manual. Indicators are used as a measure of performance of the Radiological Control Program and as a motivation for improvement, not as a goal in themselves. These indicators should be used by management to assist in focusing priorities and attention and adherence to As-Low-As-Reasonably-Achievable (ALARA) practices.

The ALARA Committees establish ALARA goals for the INEL based on forecasts and goals provided by each facility organizational manager or supervisor.

Performance goals are realistic and measurable. Stringent goals are set at least annually to reflect expected workloads and improvement of radiological performance. Goals higher than previous goals may occasionally be set due to changes in work scope or mission.

The INEL Radiological Control Performance Indicators consist of:

- Collective dose in person-rem.
- Average worker dose, maximum dose to a worker, and maximum neutron dose to a worker.
- The number of skin and clothing contaminations, including the number of contaminated wounds and facial contaminations.
- The number of radioactive material intakes resulting in a dose assessment of 10 mrem or more.
- The area of Contamination, High Contamination, and Airborne Radioactivity Areas in square feet.
- Airborne radioactivity events and spills.

These indicators also provide tracking and trending for the previous three years (where information is available).

Other Radiological Control indicators suggested in the Radiological Control Manual are tracked and trended in other reports.

- The volume and radioactivity content of radioactive waste are reported by the Shipping and Material Management Department, found in the INEL Quarterly Waste Reduction Report and on the Radioactive Waste Management Information System (RWMIS).
- Releases of liquid and airborne radioactivity discharges are reported by the Environmental Protection Department in the INEL Environmental Monitoring Report and the INEL National Emission Standard for Hazardous Pollutants - Radionuclide Annual Report.

Radiological Control Performance Indicator Report Criteria

The INEL Radiological Control Performance Indicator Report is comprised of a description of the indicator and the criteria used for measurement.

Collective Radiation Dose -

The INEL collective total penetrating radiation exposure received and the associated quarterly and annual ALARA goals.

Average Worker Radiation Dose -

The average penetrating radiation dose based on collective dose and the total number of personnel receiving measured radiation exposure.

Maximum Radiation Dose to a Worker -

The highest penetrating radiation dose received by a worker at the INEL.

Maximum Neutron Dose to a Worker -

This indicator reports the highest neutron radiation dose received by a worker.

Number of Skin Contaminations -

The total number of radioactive skin contaminations and the number of those contaminations resulting in an Occurrence Report, the number of facial contaminations, and the number of contaminated wounds.

Number of Clothing Contaminations -

The total number of radioactive clothing contaminations and the number of those contaminations resulting in an Occurrence Report.

Airborne Events -

The number of occupied facility areas not posted as Airborne Radioactivity Areas that exceed 10% Derived Air Concentrations (DAC).

Total Year-to-Date Intakes -

The number of positive bioassay results that indicate an intake of radioactive material and result in a dose assessment of 10 mrem or more from an INEL occupational exposure. The total number of positive bioassays that resulted in an Occurrence Report and those that resulted in a dose assessment of 10 mrem or greater are tracked and trended.

Contamination Area -

The total area in square feet that falls within the description of a Contamination Area as defined in Table 2-3 of the INEL Radiological Control Manual.

High Contamination Area -

The total area in square feet that falls within the description of a High Contamination Area as defined in Table 2-3 of the INEL Radiological Control Manual.

Airborne Radioactivity Area -

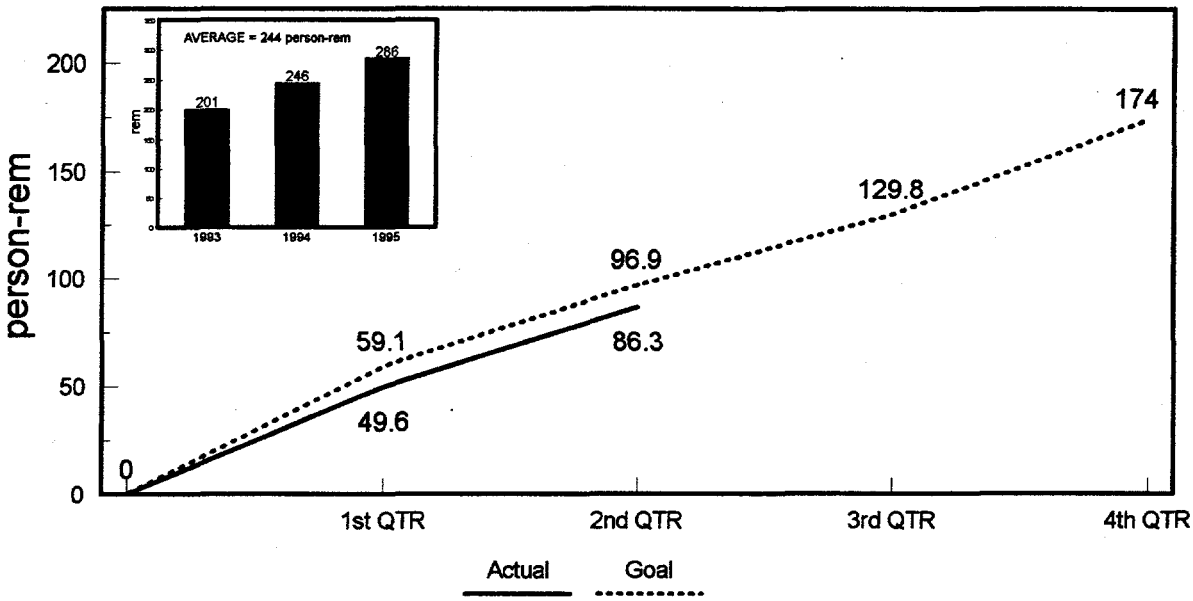
The total area in square feet that falls within the description of an Airborne Radioactivity Area as defined in Table 2-3 of the INEL Radiological Control Manual.

Radioactive Spills -

The total number of radioactive spills at the INEL. A spill is considered an inadvertent loss or release of radioactive contamination outside a Radiologically Controlled Area.

INEL Collective Year-to-Date Penetrating Radiation Dose

CY-96

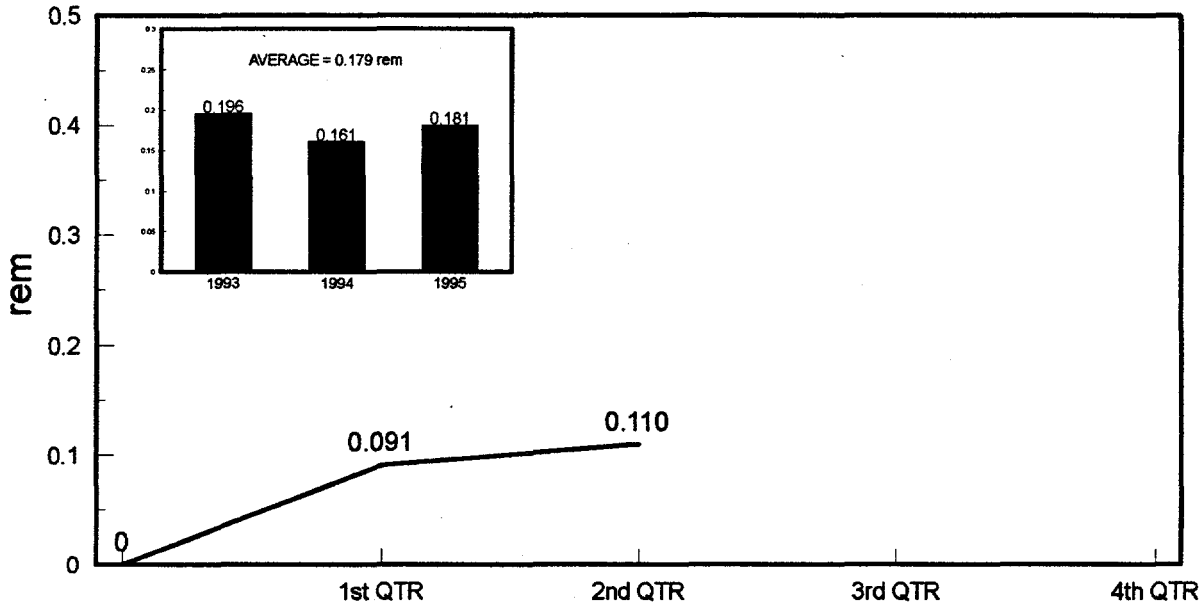


DOE and LMITCO policy is to maintain occupational radiation exposure ALARA. Measuring collective radiation exposure provides an indication of the effectiveness of the Radiological Control and ALARA Programs.

The ALARA goal for the INEL was adjusted during the second quarter from 236.4 to 174 person-rem to reflect dose reduction from use of ALARA protective measures and changes in work scope. Evaluations and adjustments to the yearly and quarterly goals are periodically performed to provide realistic values.

The INEL Performance Indicators continue to reflect a challenging, yet positive control of occupational radiation exposure. The collective radiation exposure through the end of the second quarter was 86.325 person-rem. The collective exposure represents 89% of the second quarter ALARA goal.

INEL Year-to-Date Average Worker Dose
CY-96

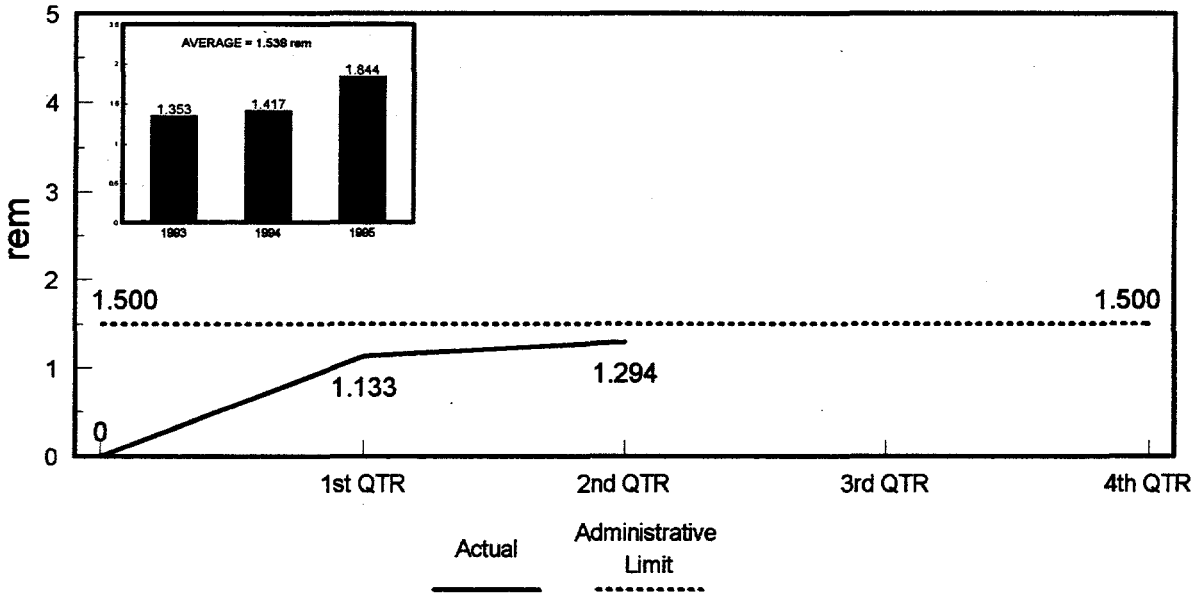


Tracking the average worker radiation exposure provides an indication of the effectiveness of the Radiological Control and ALARA Programs, and how well managers are managing their workers radiation exposure. Large increases are investigated, root causes determined and appropriate measures taken.

The average occupational radiation exposure for INEL workers through the end of the second quarter was 0.110 rem.

INEL Maximum Year-to-Date Penetrating Dose to a Worker

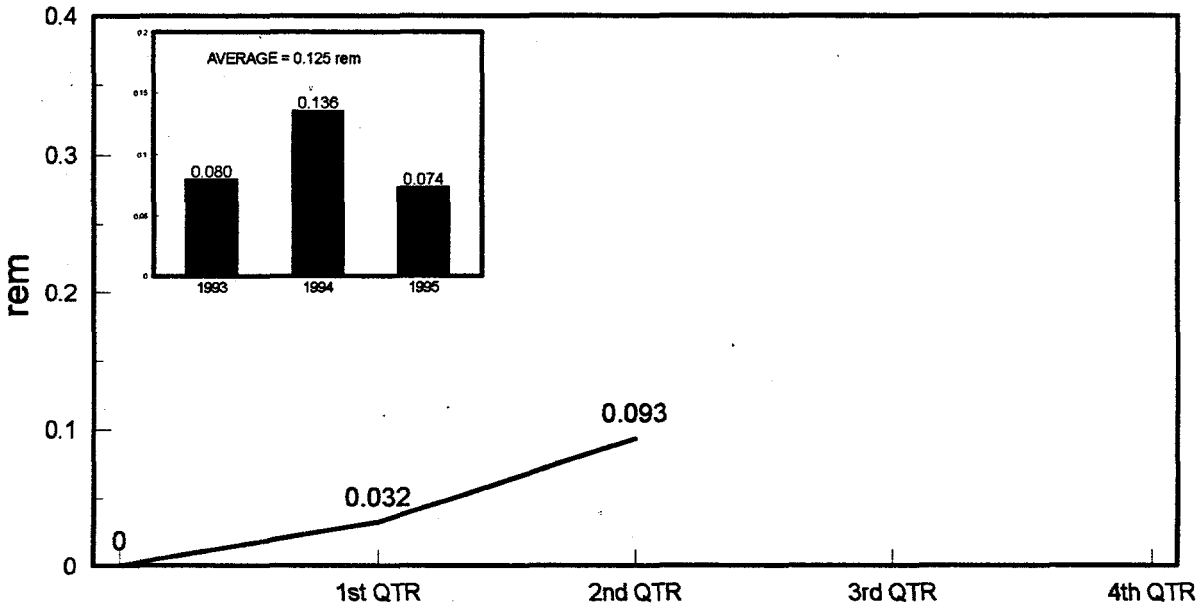
CY-96



The maximum penetrating radiation dose to a worker provides another indication of how well worker radiation exposure is being controlled. Managers should use these reports as an aid in administration of their workers occupational radiation exposure.

The maximum penetrating radiation dose to a worker through the end of the second quarter was 1.294 rem. This individual was involved in activities associated with the NWCF turnaround projects.

INEL Maximum Year-to-Date Neutron Dose to a Worker
CY-96

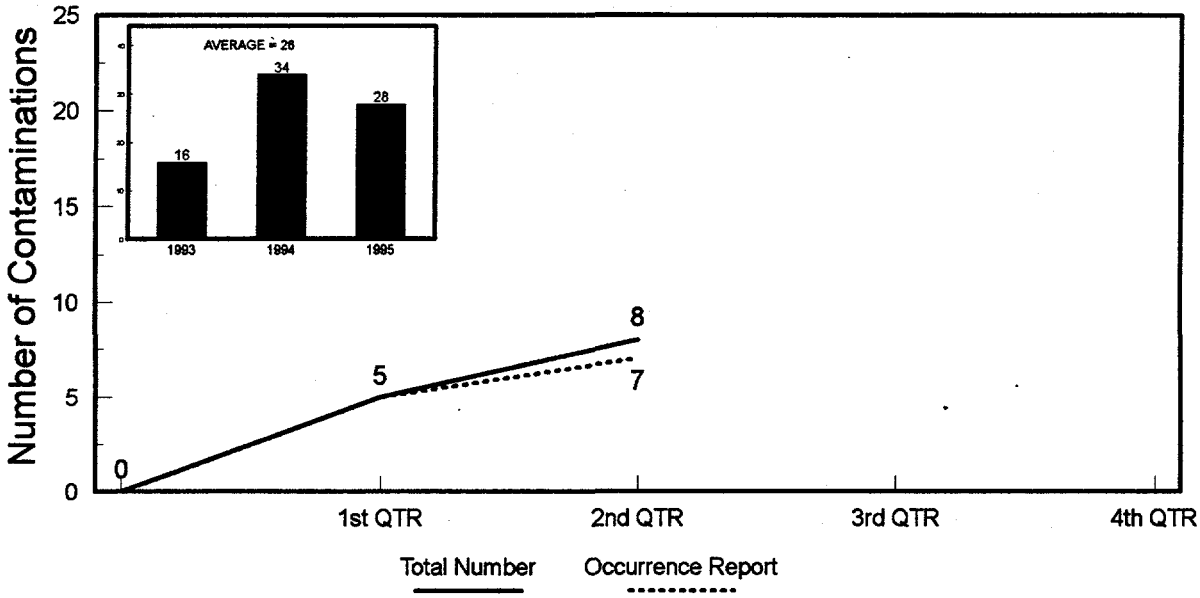


Tracking the maximum neutron radiation dose to a worker provides an indication of how well occupational exposure to neutron radiation is managed. Quality factors of neutron radiation are not as well known as those of alpha, beta, and gamma radiation. Neutron radiation is included in the total penetrating radiation but, but is also tracked separately.

The INEL maximum neutron radiation dose to a worker through the end of the second quarter was 0.093 rem.

INEL Year-to-Date Skin Contaminations

CY-96



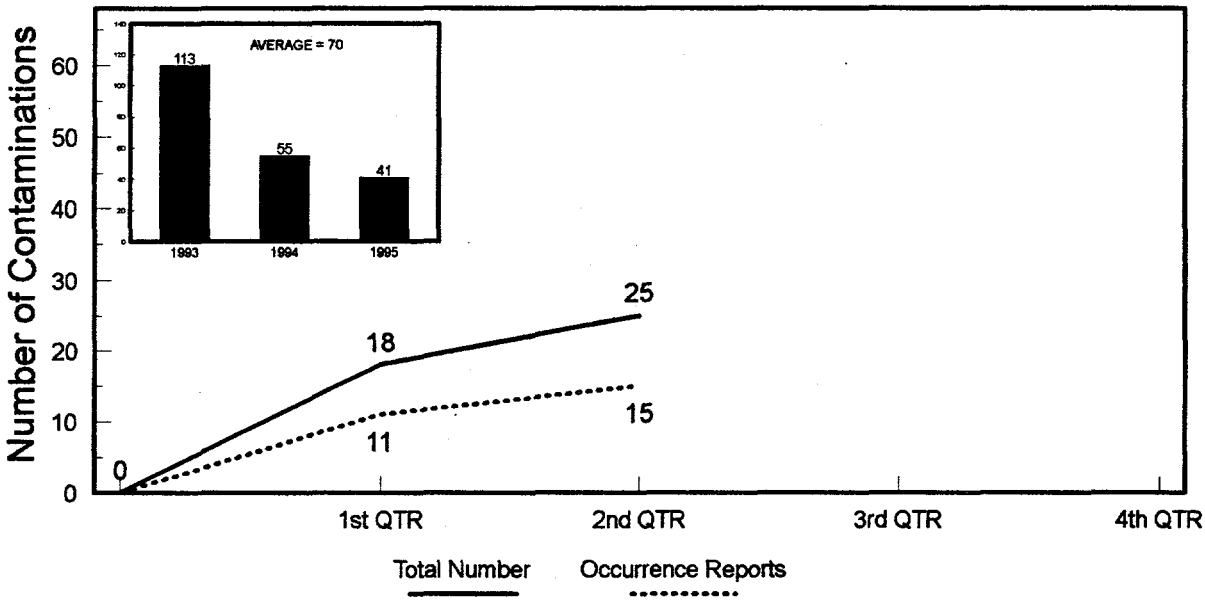
Skin contamination events are a measure of the effectiveness of the radiological protection program, specifically, how well radioactive contamination is controlled.

There were three skin contaminations at the INEL during the second quarter. Two resulted in ORs.

There were no facial contaminations or contaminated wounds at the INEL during the second quarter.

INEL Year-to-Date Clothing Contaminations

CY-96

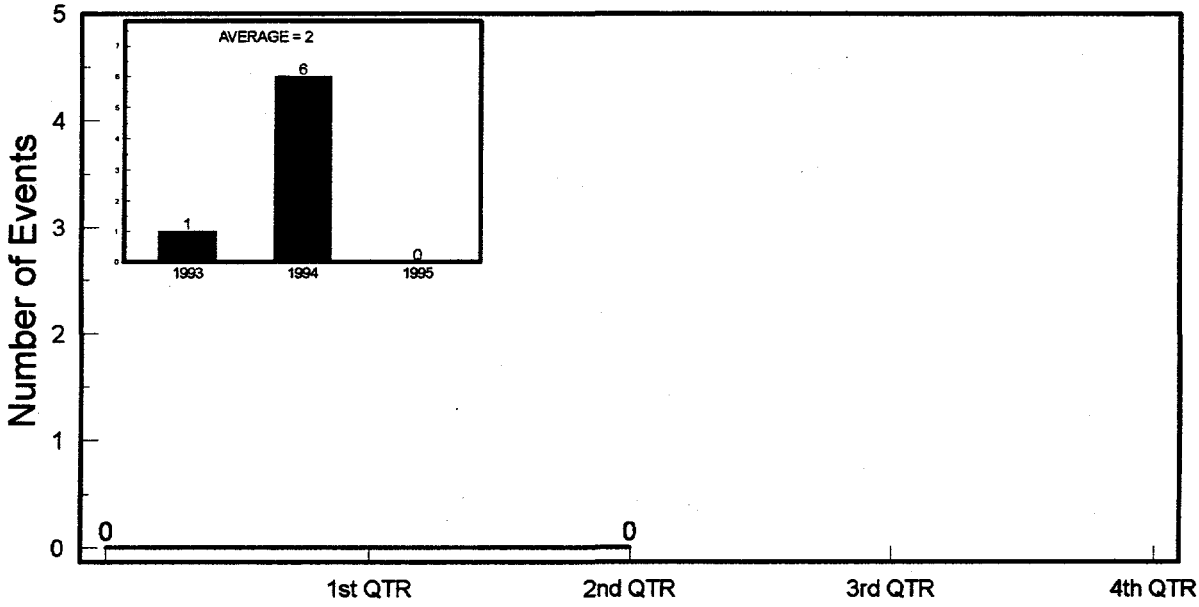


Clothing contamination events are a measure of the overall effectiveness of the radiolgical protection program, specifically, how well radioactive contamination is controlled by safe radiological work practices.

There were 25 clothing contaminations at the INEL through the end of the second quarter. Fifteen events resulted in ORs. Seven occurred during the second quarter, of which four resulted in ORs, two at ICPP and two at PBF.

INEL Year-to-Date Airborne Radioactivity Events

CY-96

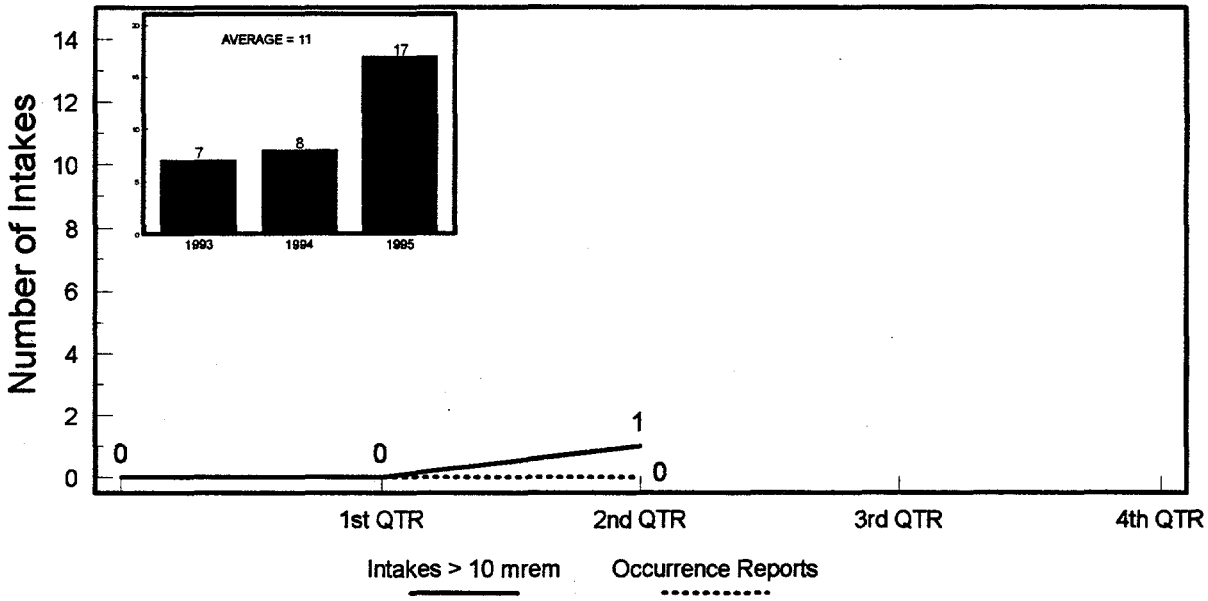


Air samplers monitor occupied facility areas to quantify concentrations of airborne radioactivity. The DOE unit of measure is a DAC. A DAC is the atmospheric concentration of a radionuclide which, if inhaled continually for one work year (2000 hours), would result in an internal dose of 5.0 rem Committed Effective Dose Equivalent (CEDE). An area which exceeds 10% of one DAC must be posted as an Airborne Radioactivity Area.

No airborne activity greater than 10% DAC was detected in areas not posted as Airborne Radioactivity Areas during the second quarter.

INEL Year-to-Date Radioactive Material Intakes

CY-96

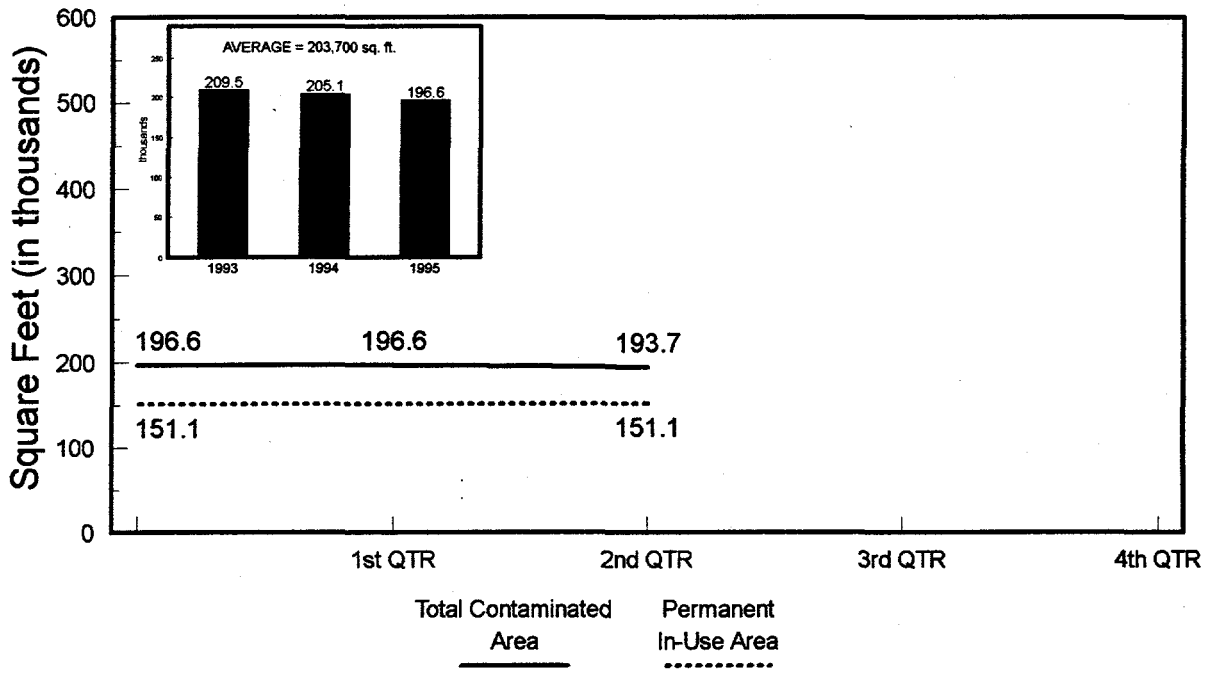


This indicator depicts the number of positive bioassay results that indicate an intake of radioactive material and result in a dose assessment of 10 mrem or greater.

The total number of 1996 positive bioassays resulting in a dose assessment of 10 mrem or more at the INEL through the second quarter was 1. This positive indication did not meet reportable criteria in accordance with DOE Order 5000.3B.

NOTE:
Six additional positive bioassay assessments of 10 mrem or more were assigned to the 1995 INEL total, bringing the total to seventeen. Although the dose assessment was not completed until 1996, the deposition was assigned to the quarter of 1995 in which the actual intake occurred.

INEL Contamination Area
CY-96

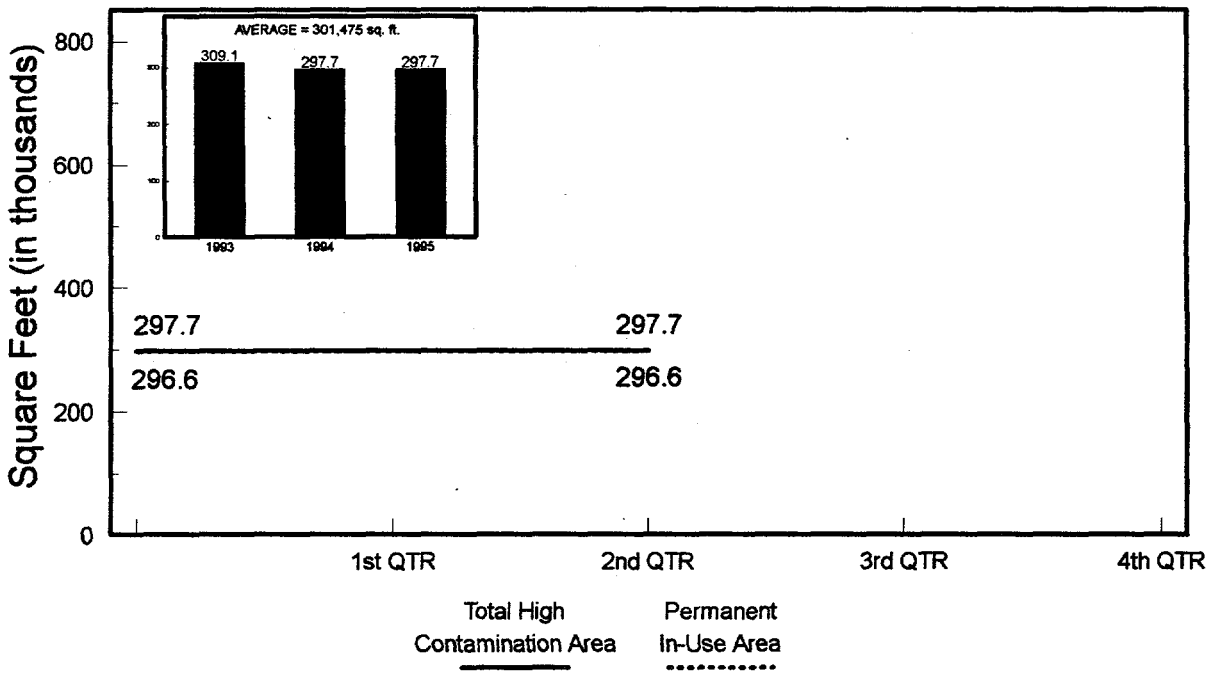


This indicator is used to report the total area designated as Contamination Area as defined in Table 2-3 of the INEL RCM.

Area is reported in units of square feet. The reported areas are further separated into areas which are permanent and in-use. This establishes a baseline for future reporting and allows areas other than permanent and in-use to be evaluated for decontamination.

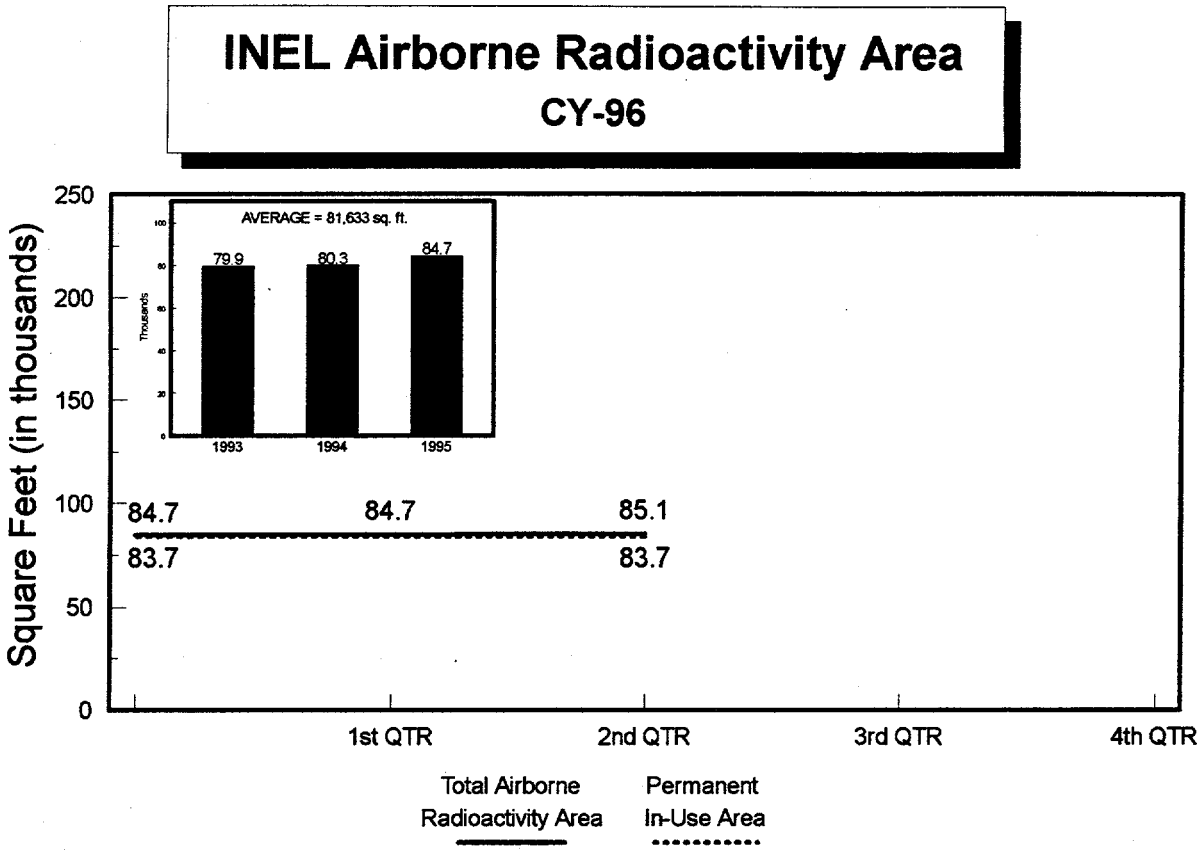
The total Contamination Area at the INEL at the end of the second quarter was 193,667 square feet. Of this area, 151,123 square feet was designated as permanent and in-use.

INEL High Contamination Area
CY-96



This indicator is used to report the total area designated as High Contamination Area as defined in Table 2-3 of the INEL RCM. Area is reported in units of square feet. The reported area is separated into areas which are permanent and in-use. This establishes a baseline for future reporting and allows areas other than permanent and in-use to be evaluated for decontamination.

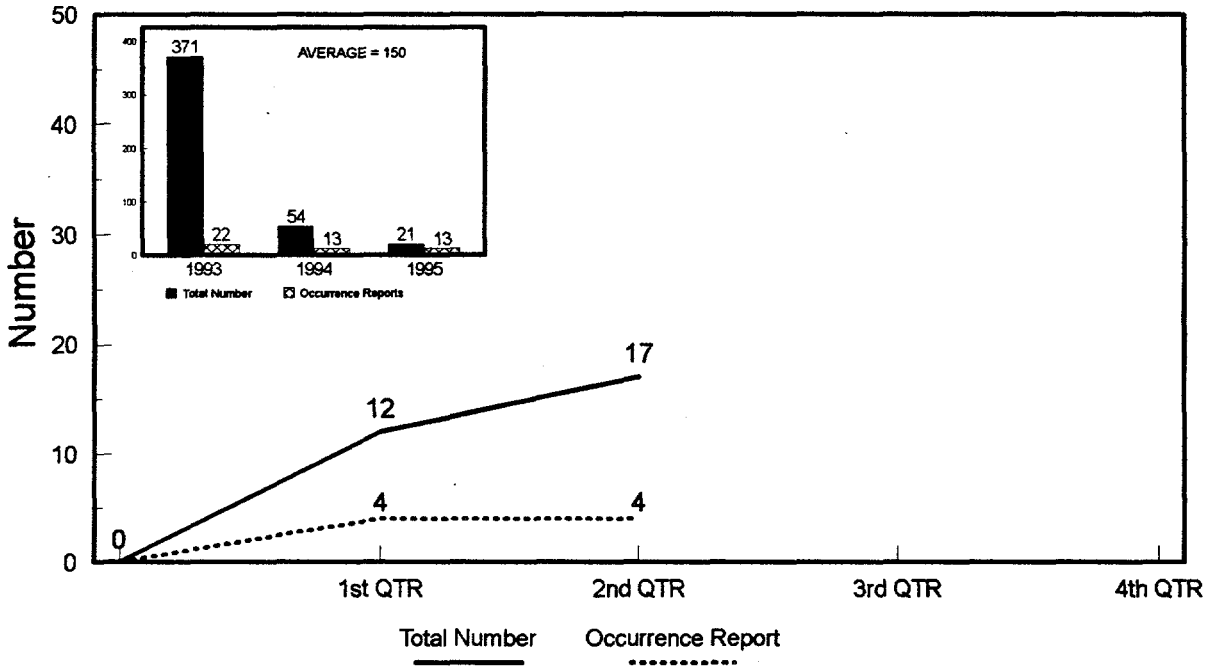
The total High Contamination Area at the INEL at the end of the second quarter was 297,663 square feet. Of this area, 296,641 square feet was designated as permanent and in-use.



This indicator is used to report the total area designated as Airborne Radioactivity Area as defined in Table 2-3 of the INEL RCM. These areas are reported in units of square feet. The reported areas are also separated into permanent and in-use areas. This establishes a baseline for future reporting and allows areas other than permanent and in-use to be evaluated for decontamination.

The total Airborne Radioactivity Area at the INEL at the end of the second quarter was 85,084 square feet. Of this area, 83,662 square feet was designated as permanent or in-use.

INEL Year-to-Date Spills
CY-96



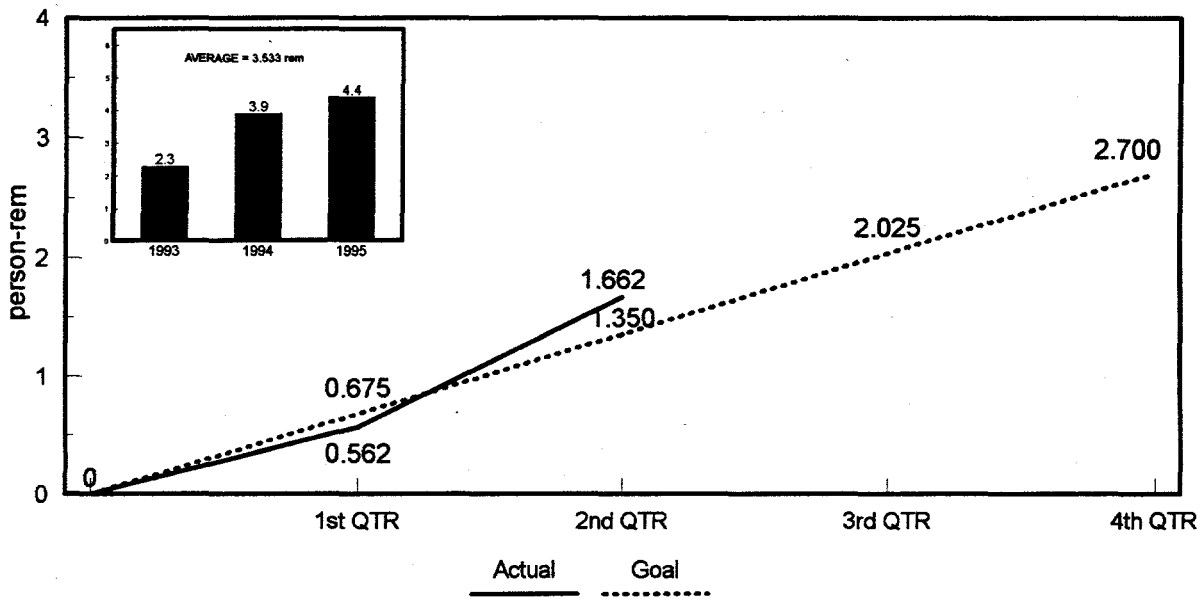
This indicator is used to report inadvertent loss or release of radioactive material. It includes all events, as well as those losses or releases of radioactively contaminated material that meet DOE reportable criteria.

The INEL had seventeen spills or loss of control of radioactive material through the end of the second quarter, of which four resulted in ORs. All seventeen events occurred at the ICPP. Five non-reportable losses of radioactive material occurred during the second quarter.

Central Facilities Area

The CFA Facility report also includes
other outlying area information

CFA Collective Year-to-Date Penetrating Radiation Dose
CY-96

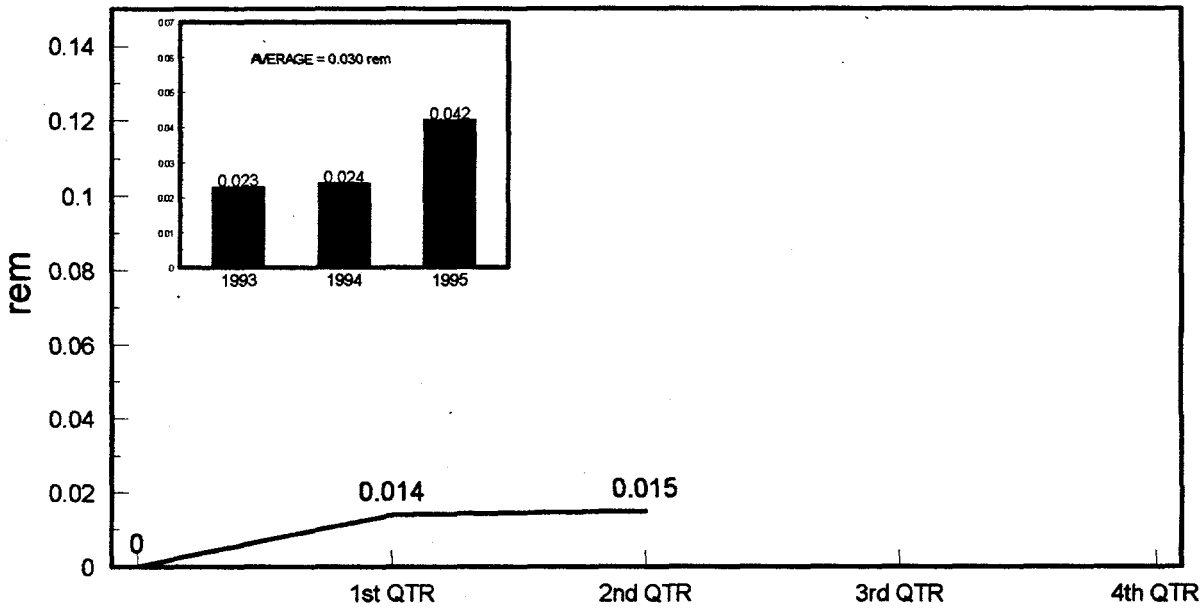


The collective occupational radiation exposure at CFA through the end of the second quarter was 1.662 person-rem.

Major contributors to CFA's total occupational radiation exposure include Decontamination and Decommissioning (D&D) activities, Environmental Restoration (ER) projects, environmental monitoring and facility maintenance.

CFA Year-to-Date Average Worker Dose

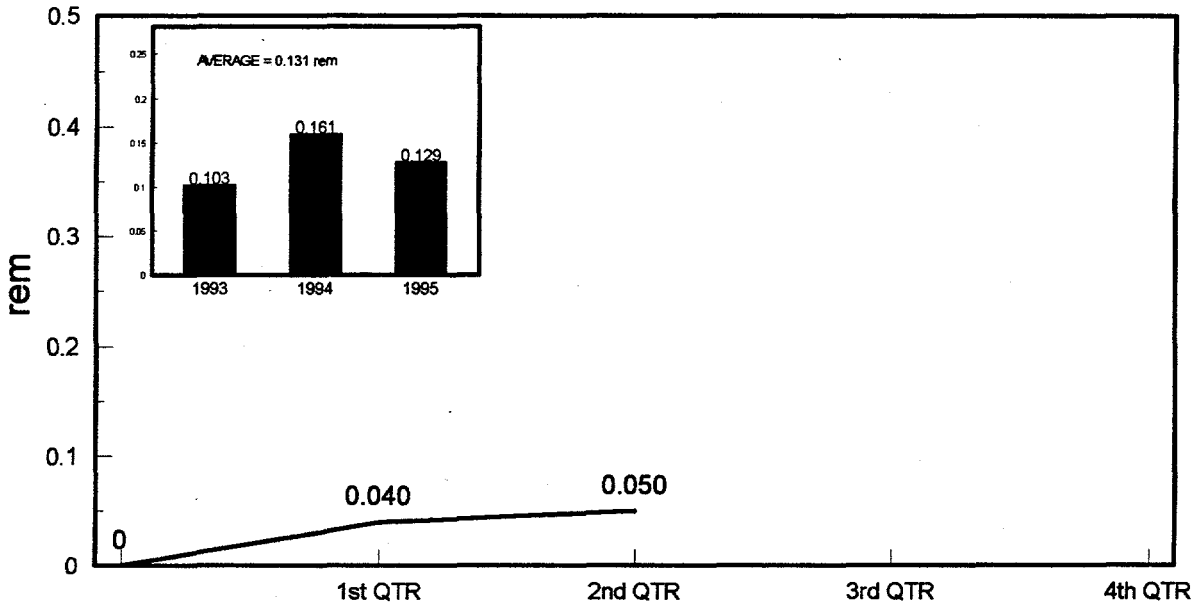
CY-96



The average worker radiation exposure provides an indication of the effectiveness of the Radiological Control and ALARA Programs.

The average CFA worker occupational radiation exposure through the end of the second quarter was 0.015 rem. Major sources of exposure involved D&D and ER work activities.

CFA Maximum Year-to-Date Penetrating Dose to a Worker
CY-96

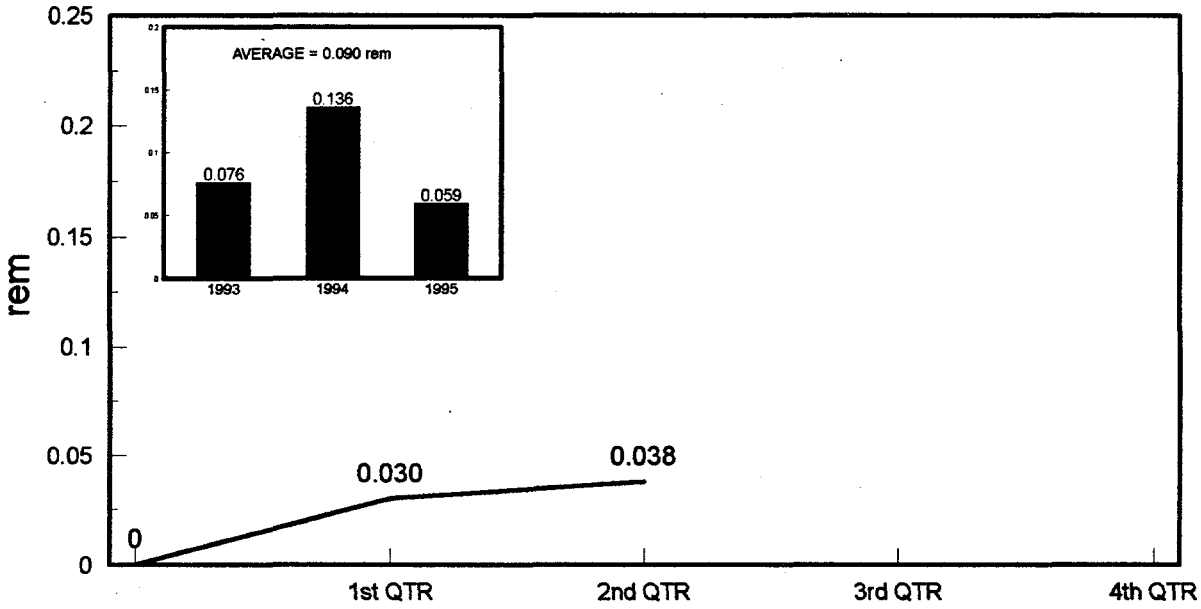


The maximum penetrating radiation dose to a worker provides another indication of how well worker radiation exposure is being managed.

The maximum penetrating radiation dose to a CFA worker through the the end of the second quarter was 0.050 rem.

CFA Maximum Year-to-Date Neutron Dose to a Worker

CY-96

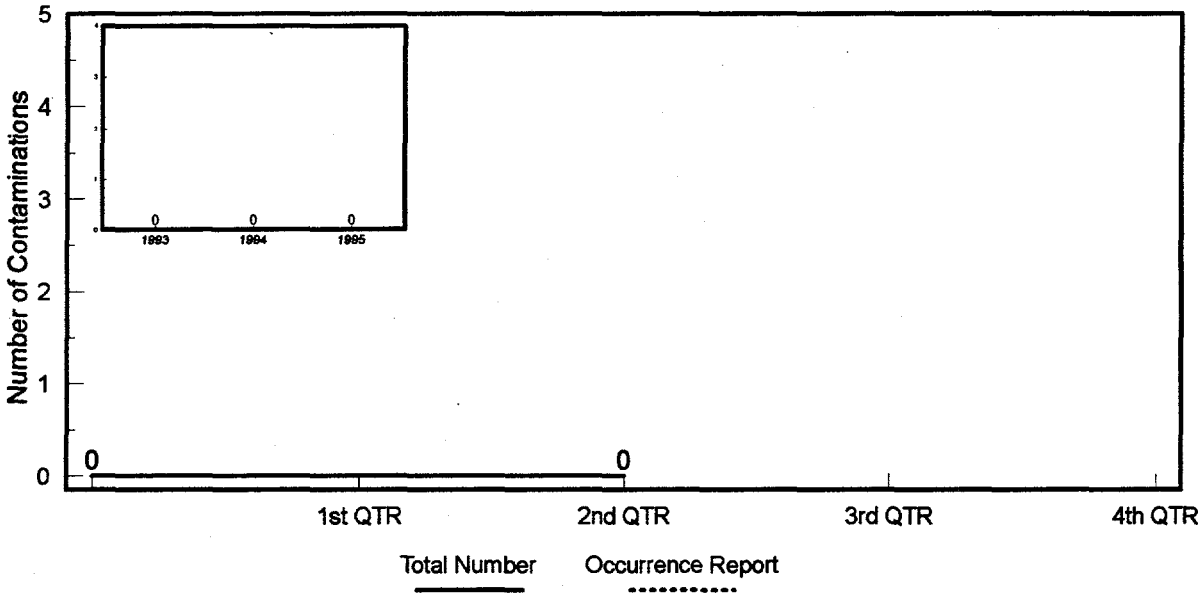


The maximum neutron radiation dose to a worker provides an indication of how well occupational exposure to neutron radiation is managed.

The CFA maximum neutron radiation dose to a worker through the end of the second quarter was 0.038 rem.

CFA Year-to-Date Skin Contaminations

CY-96

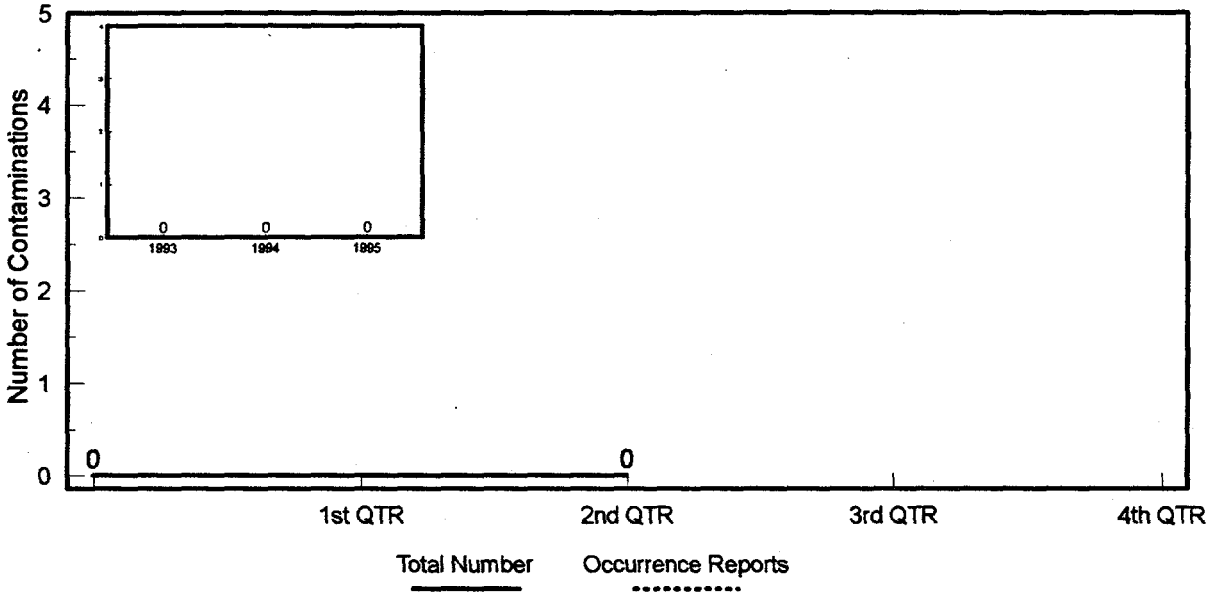


Skin contamination events are a measure of the effectiveness of the radiological protection program, specifically, how well radioactive contamination is controlled.

There were no skin contaminations at CFA areas during the second quarter.

CFA Year-to-Date Clothing Contaminations

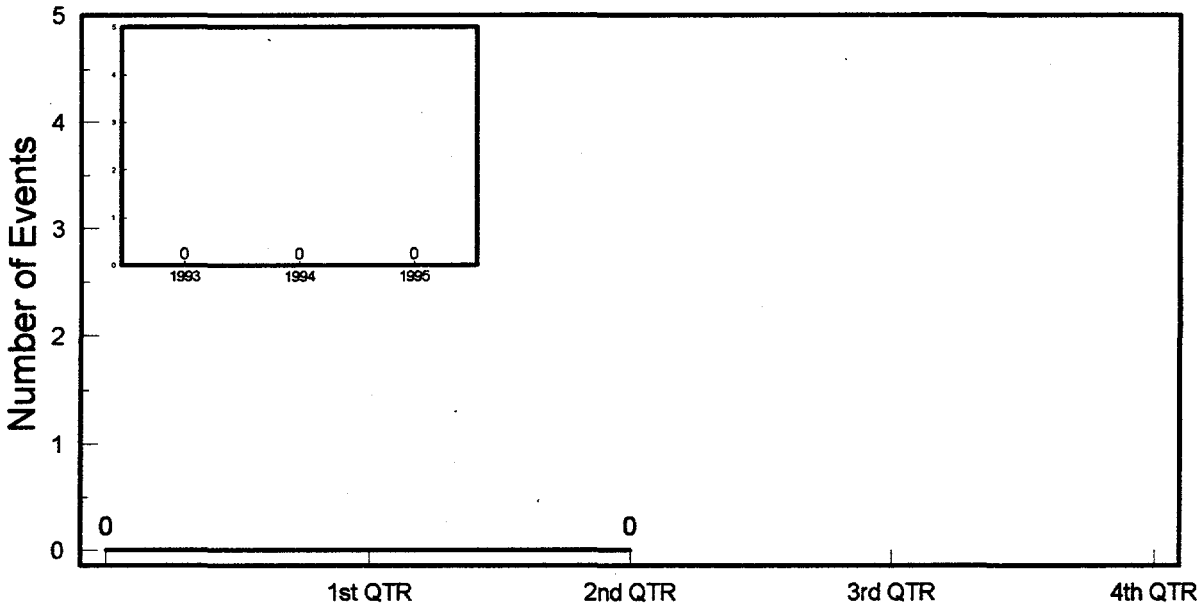
CY-96



Clothing contamination events are a measure of the overall effectiveness of the radiological protection program, specifically, how well radioactive contamination is controlled and how well workers adhere to safe radiological work practices.

There were no clothing contaminations at CFA areas through the end of the second quarter.

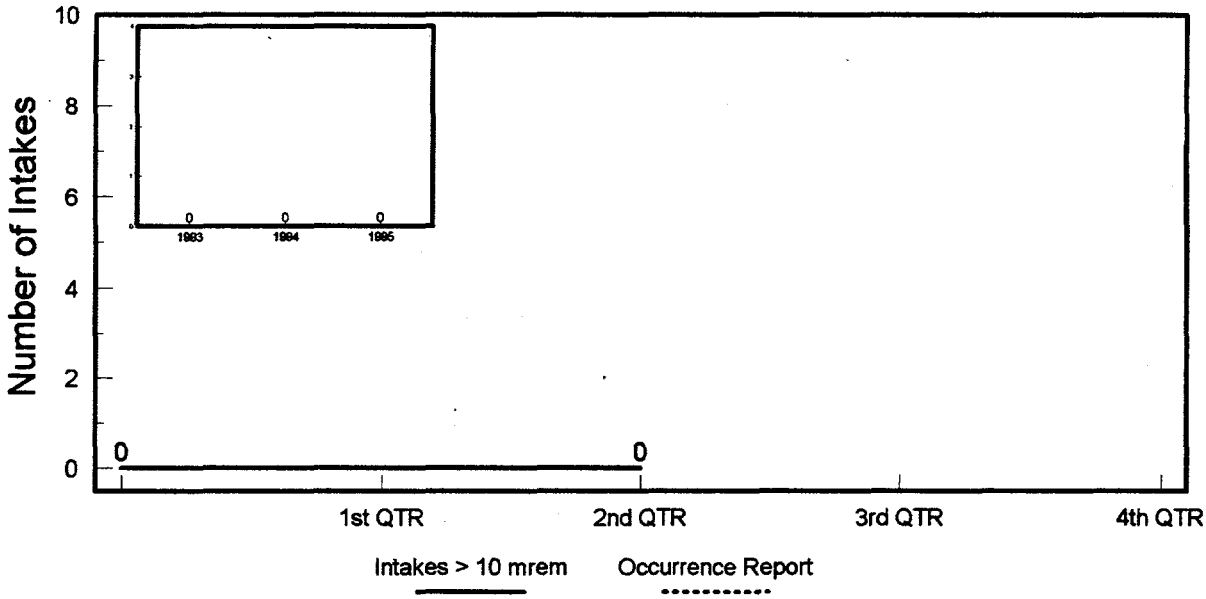
CFA Year-to-Date
Airborne Radioactivity Events
CY-96



Air samplers monitor occupied process and laboratory areas to quantify concentrations of airborne radioactivity. The DOE unit of measure is a DAC. An area which exceeds 10% of one DAC must be posted as an Airborne Radioactivity Area.

No airborne activity greater than 10% DAC was detected at CFA areas during the second quarter.

CFA Year-to-Date Radioactive Material Intakes
CY-96

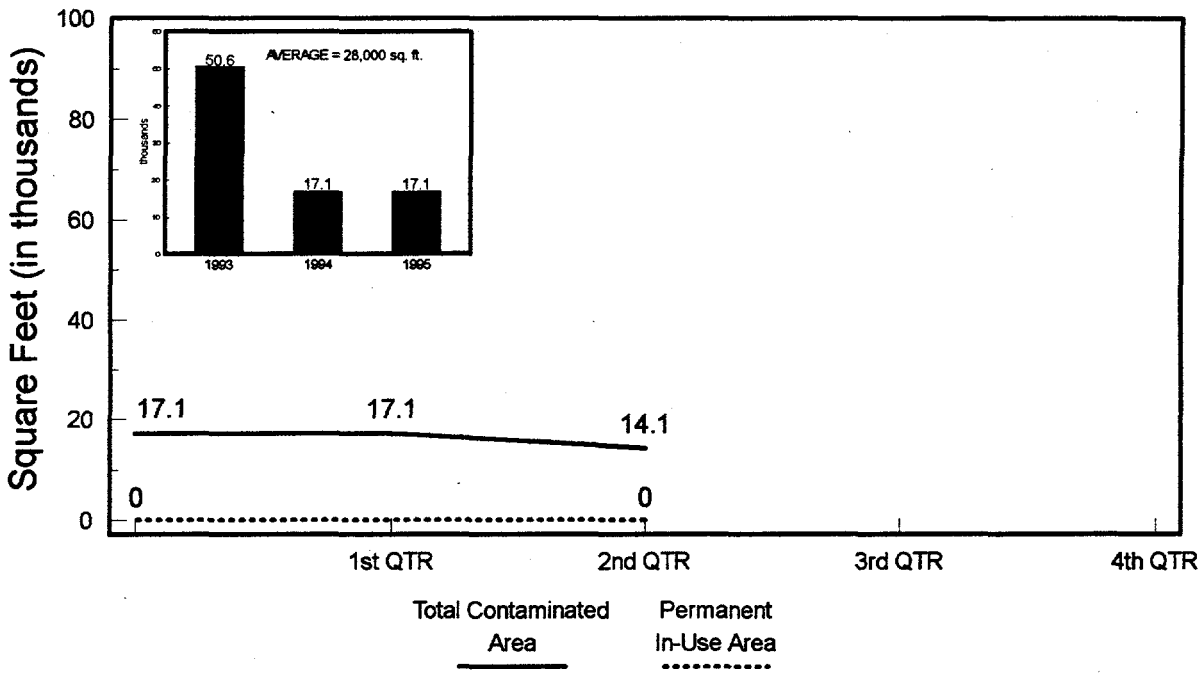


This indicator depicts the number of positive bioassay results that indicate an intake of radioactive material and result in a dose assessment of 10 mrem or greater during radiological work activities.

There were no positive bioassays indicating an intake of radioactive material that resulted in a dose assessment of 10 mrem or greater at CFA through the end of the second quarter.

NOTE:
One positive bioassay indication previously reported at CFA was not correct. Information from the positive bioassay was misinterpreted but has since been corrected.

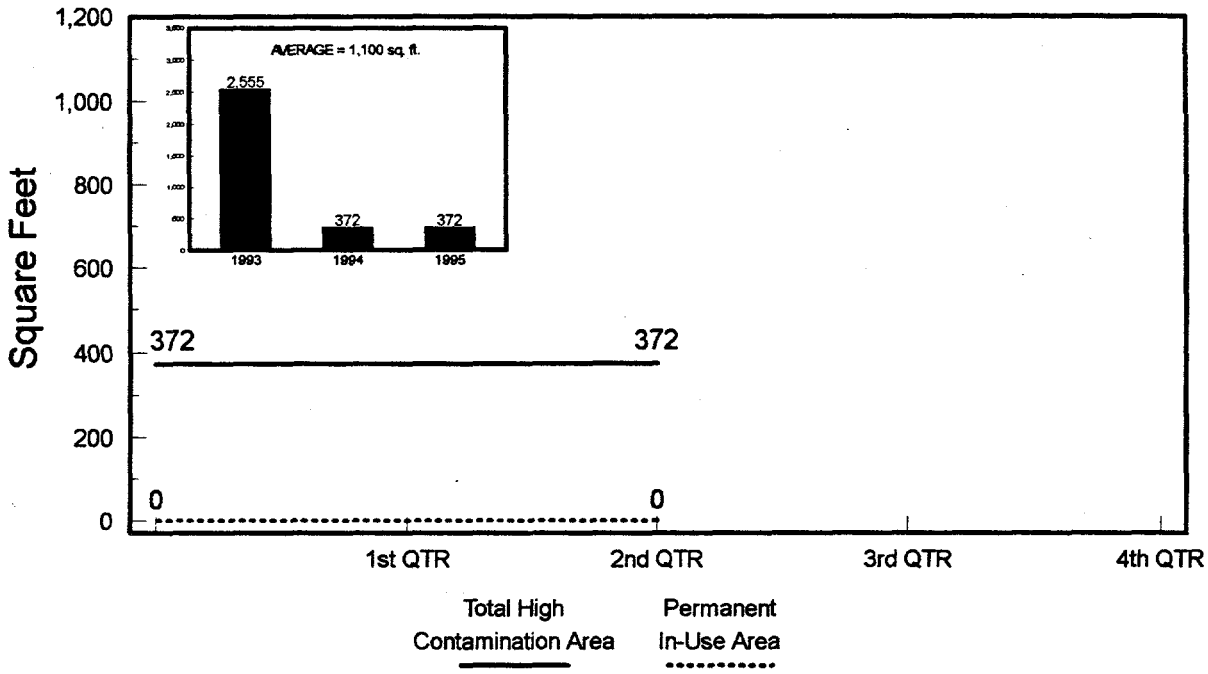
CFA Contamination Area
CY-96



This indicator is used to report the total CFA area designated as Contamination Area as defined in Table 2-3 of the INEL RCM.

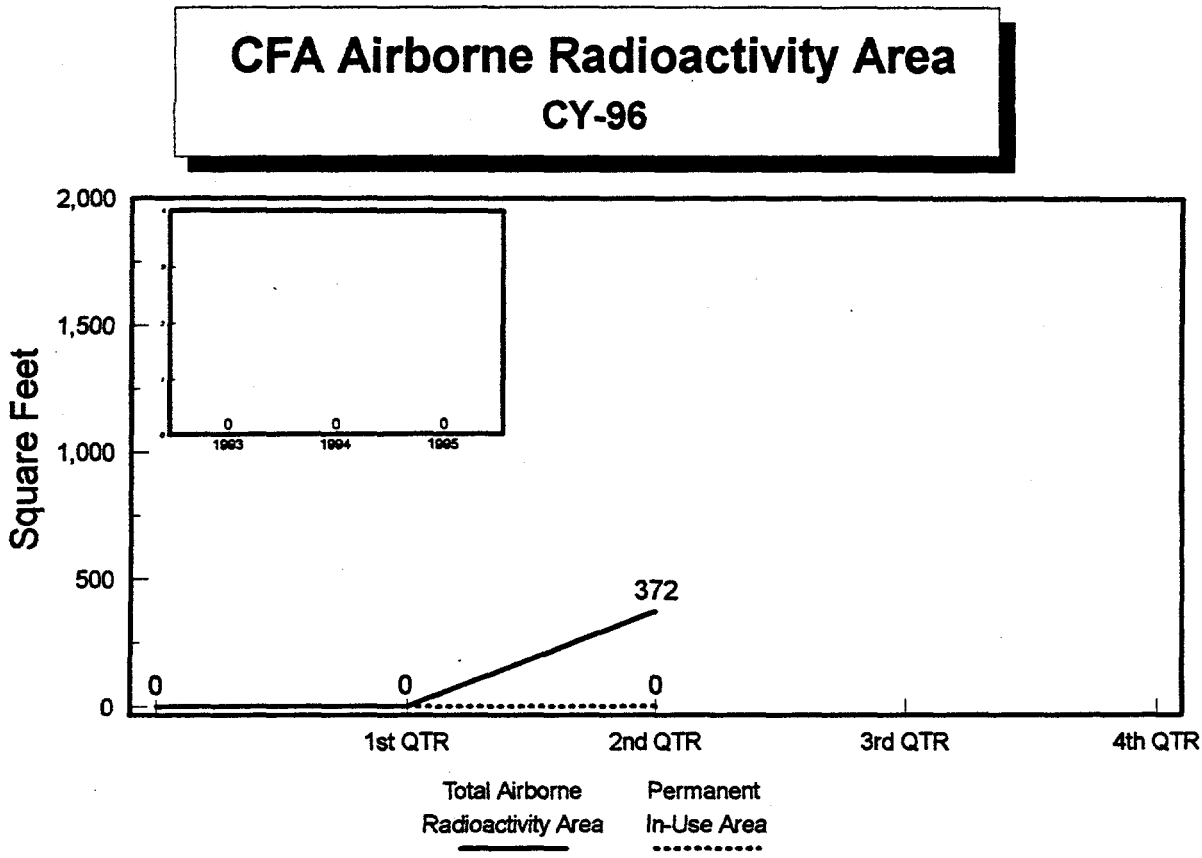
The total Contamination Area at CFA at the end of the second quarter was 14,105 square feet. None of this area was designated as permanent and in-use.

CFA High Contamination Area
CY-96



This indicator is used to report the total CFA area designated as High Contamination Area as defined in Table 2-3 of the INEL RCM.

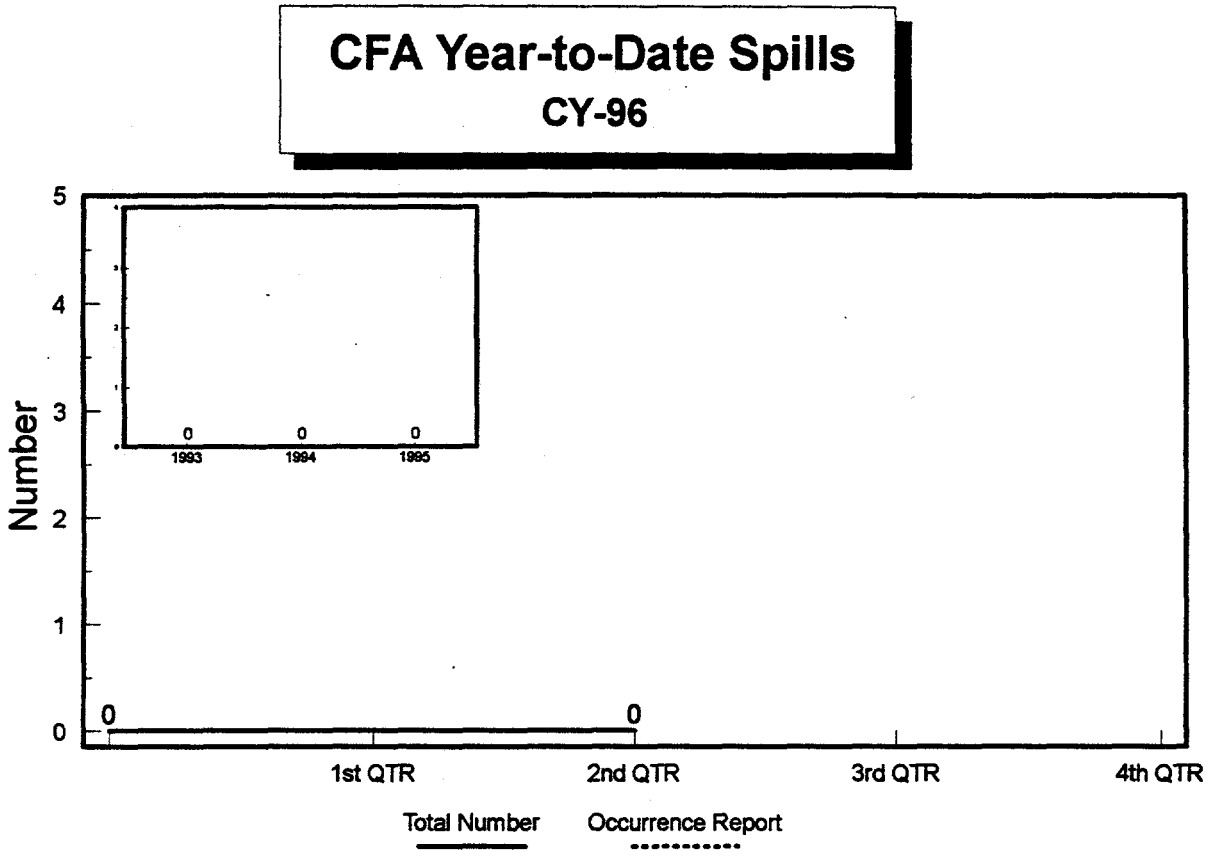
The total High Contamination Area at CFA at the end of the second quarter was 372 square feet. None of this area was designated as permanent and in-use.



This indicator is used to report the total CFA area designated as Airborne Radioactivity Area as defined in Table 2-3 of the INEL RCM.

The total Airborne Radioactivity Area at CFA at the end of the second quarter was 372 square feet. None of this area was designated as permanent or in-use.

The increase in the CFA Airborne Radioactivity Area is due to demolition of Hot Cell 2 at ARA I.

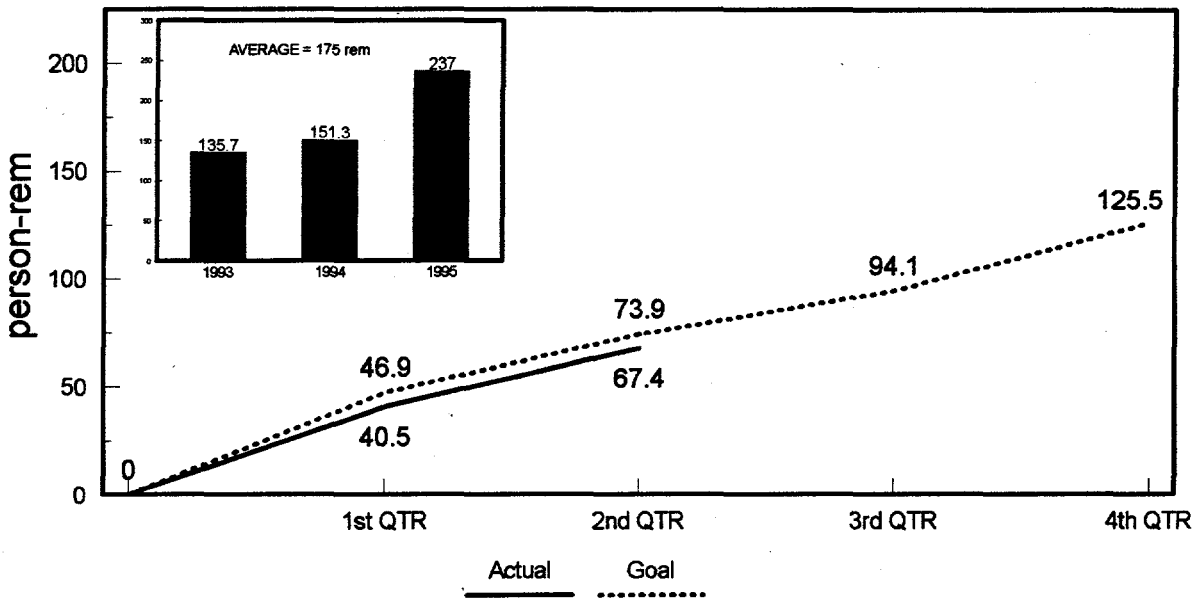


This indicator is used to report inadvertent loss or release of radioactive material.

CFA had no radioactive spills or loss of control of radioactive material during the second quarter.

Idaho Chemical Processing Plant

ICPP Collective Year-to-Date Penetrating Radiation Dose
CY-96

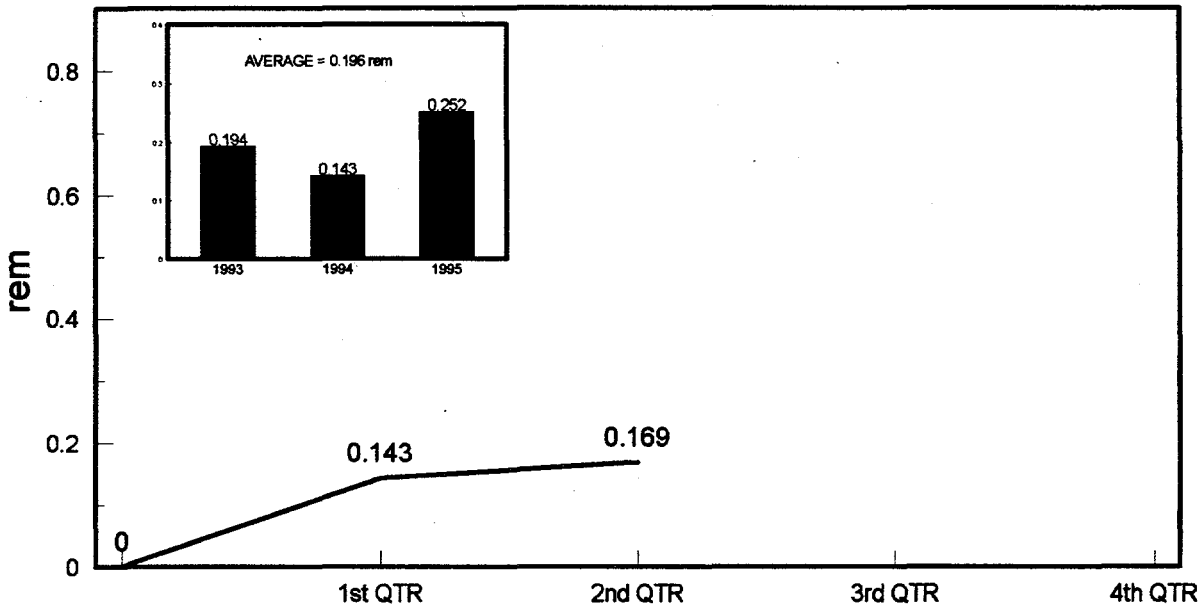


The ICPP collective occupational radiation exposure through the end of the second quarter was 67.365 person-rem.

Major contributors to the second quarter occupational radiation exposure were the NWCF turnaround projects, the ROVER demolition project, and the Vessel 106 liner project.

The ALARA goal for the ICPP was adjusted from 187.7 to 125.5 person-rem during the second quarter due to dose reduction from use of ALARA protective measures and changes in work scope.

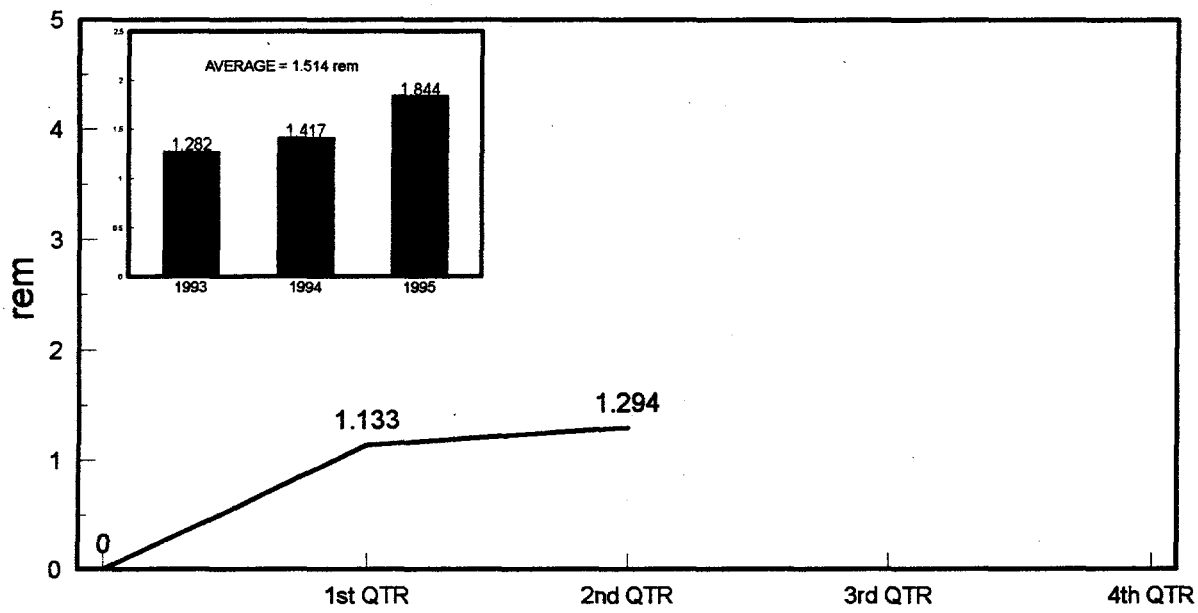
ICPP Year-to-Date Average Worker Dose
CY-96



The average worker radiation exposure provides an indication of the effectiveness of the Radiological Control and ALARA Programs.

The average occupational radiation exposure for ICPP workers through the end of the second quarter was 0.169 rem. The major sources of exposure were related to NWCF turnaround, ROVER, and Vessel 106 projects.

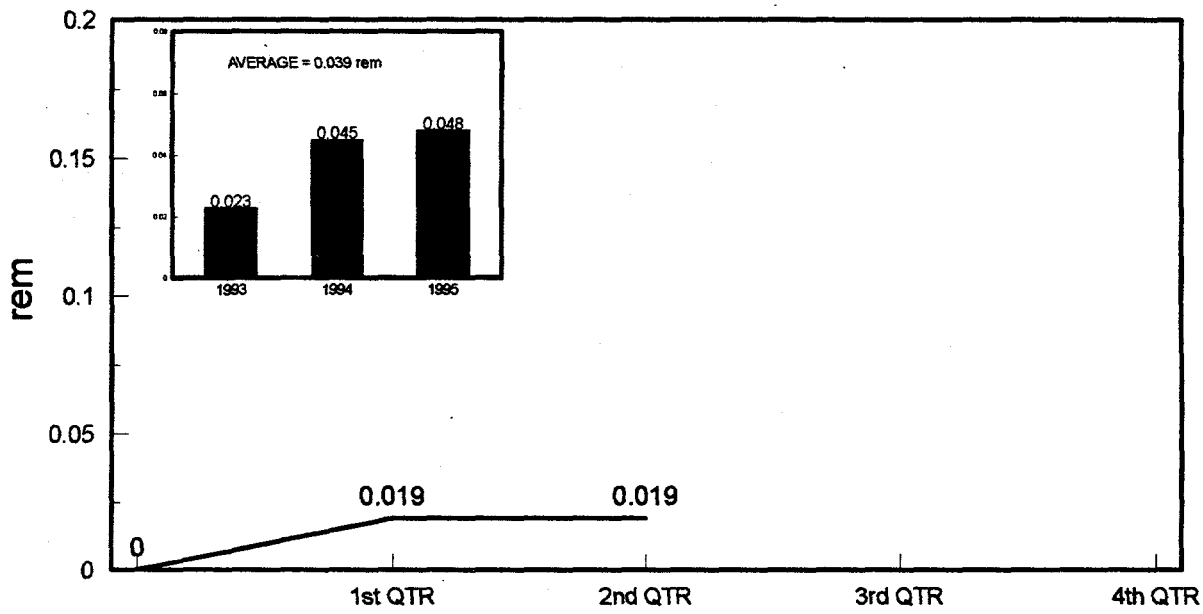
ICPP Maximum Year-to-Date Penetrating Dose to a Worker
CY-96



The maximum penetrating radiation dose to a worker provides another indication of how well worker radiation exposure is being managed.

The maximum penetrating radiation dose to an ICPP worker through the end of the second quarter was 1.294 rem. This individual was involved in activities associated with the NWCF turnaround project.

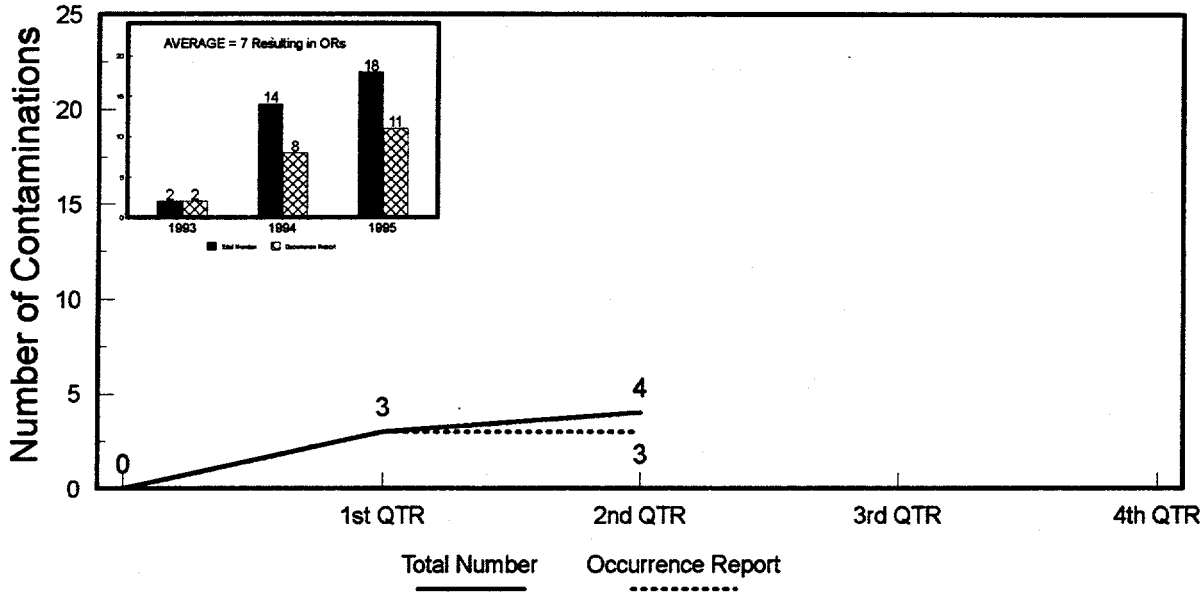
ICPP Maximum Year-to-Date Neutron Dose to a Worker
CY-96



The maximum neutron radiation dose to a worker provides an indication of how well occupational exposure to neutron radiation is managed.

The ICPP maximum neutron radiation dose to a worker through the end of the second quarter was 0.019 rem.

ICPP Year-to-Date Skin Contaminations
CY-96



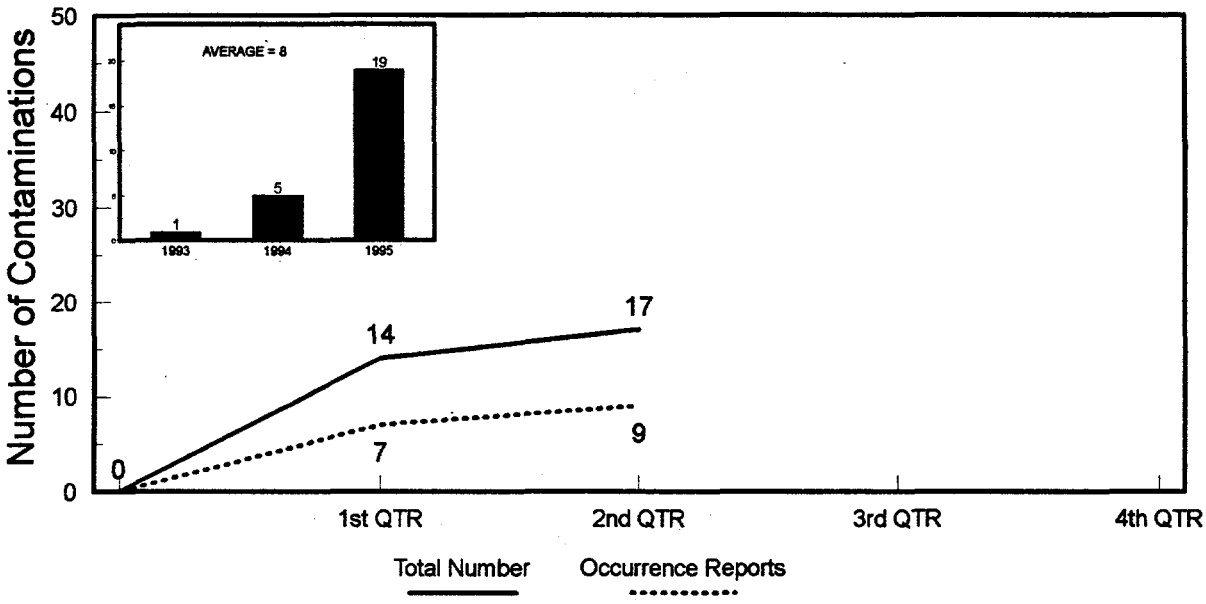
Skin contamination events are a measure of the effectiveness of the radiological protection program, specifically, how well radioactive contamination is controlled.

One non-reportable skin contamination occurred at the ICPP during the second quarter.

There were no facial contaminations or contaminated wounds at the ICPP during the second quarter.

ICPP Year-to-Date Clothing Contaminations

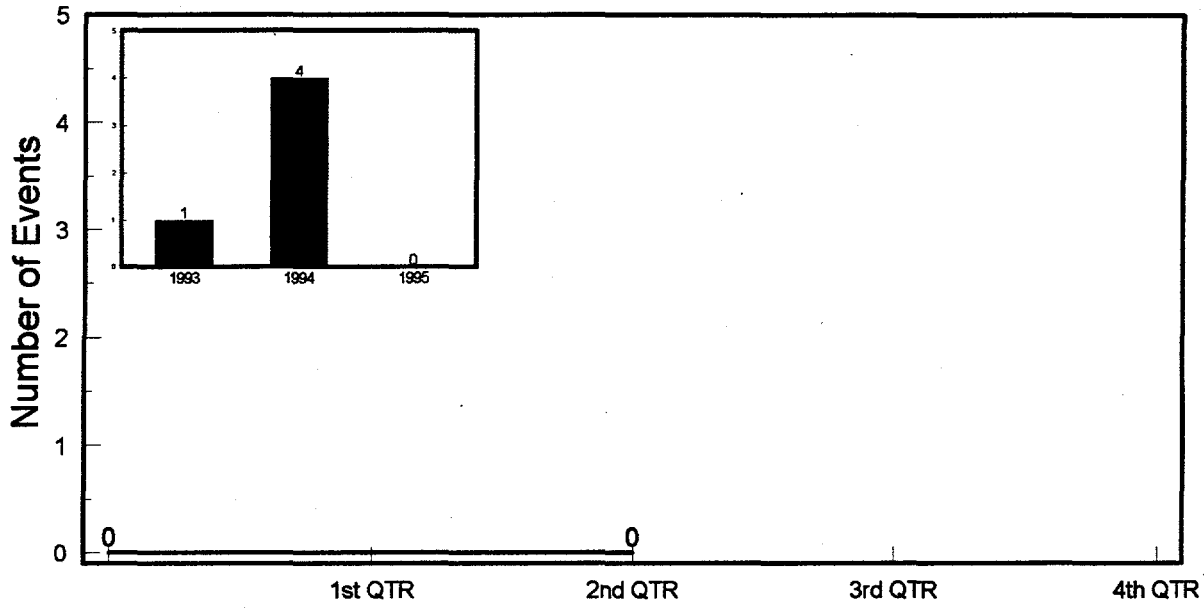
CY-96



Clothing contamination events are a measure of the overall effectiveness of the radiolgical protection program, specifically, how well radioactive contamination is controlled and how well workers adhere to safe radiological work practices.

Three clothing contaminations were reported during the second quarter at the ICPP. Two resulted in ORs. Detailed information is contained in OR ID-LITC-WASTEMNGT-1996-0006.

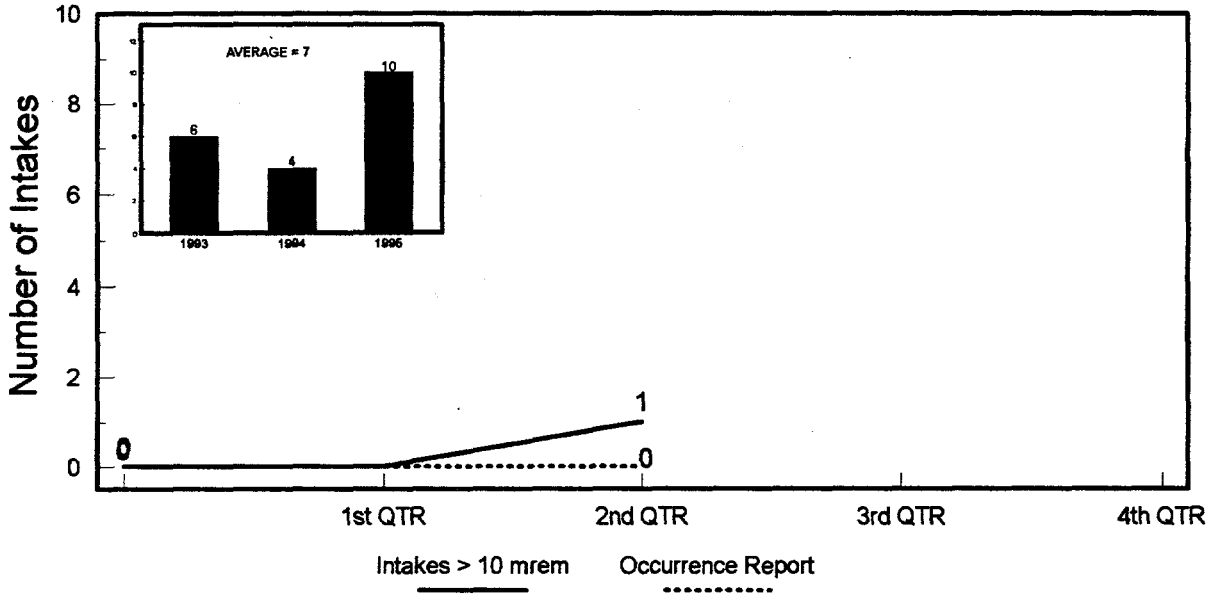
ICPP Year-to-Date
Airborne Radioactivity Events
CY-96



Air samplers monitor occupied process and laboratory areas to quantify concentrations of airborne radioactivity. The DOE unit of measure is a DAC. An area which exceeds 10% of one DAC must be posted as an Airborne Radioactivity Area.

No airborne activity greater than 10% DAC was detected in ICPP areas not posted as Airborne Radioactivity Areas during the second quarter.

ICPP Year-to-Date Radioactive Material Intakes
CY-96

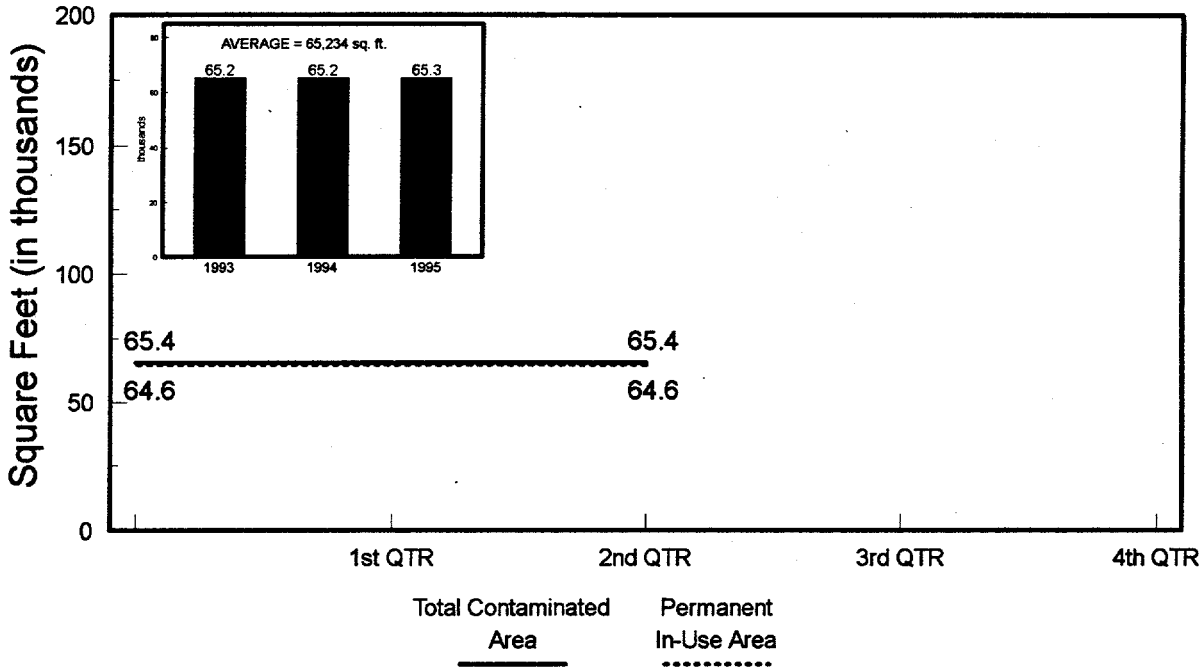


This indicator depicts the number of positive bioassay results that indicate an intake of radioactive material and result in a dose assessment of 10 mrem or greater from an ICPP exposure during radiological work activities.

There was one positive bioassay from 1996 indicating an intake of radioactive material that resulted in a dose assessment of 10 mrem or greater at the ICPP during the second quarter.

NOTE:
Six additional positive bioassay assessments of 10 mrem or more were assigned to the 1995 total, bringing the total to ten. Although the dose assessment was not completed until 1996, the deposition is assigned to the quarter of 1995 in which the actual intake occurred.

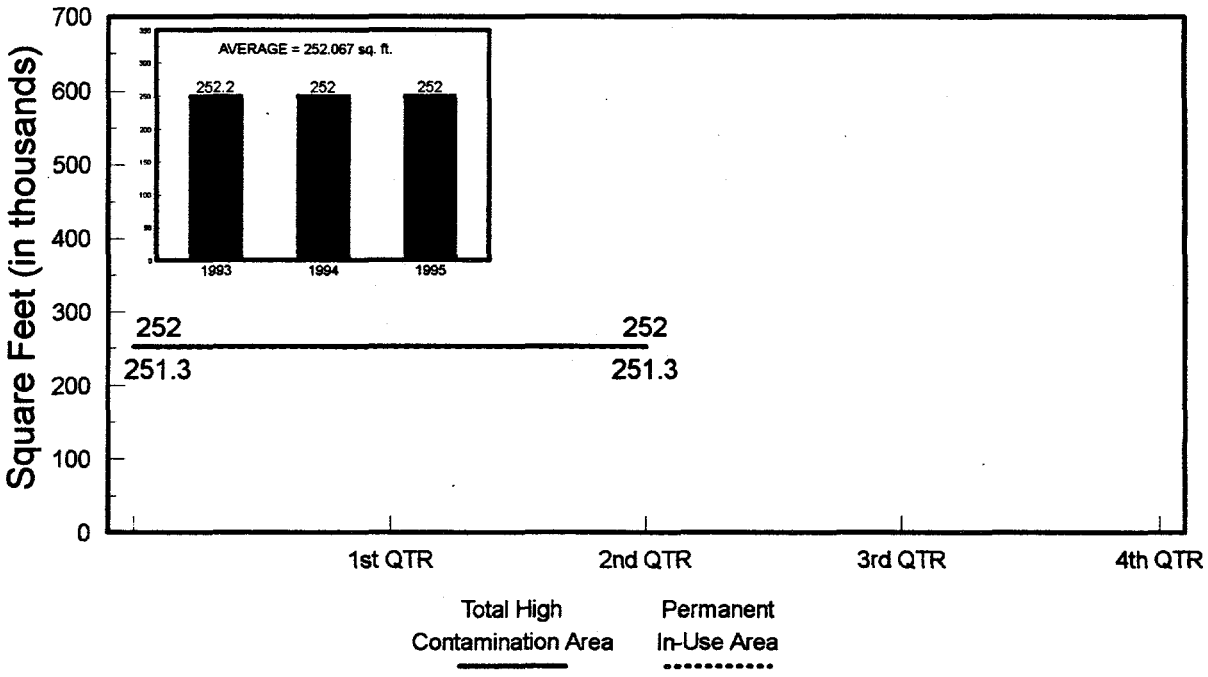
ICPP Contamination Area
CY-96



This indicator is used to report the total ICPP area designated as Contamination Area as defined in Table 2-3 of the INEL RCM.

The total Contamination Area at the ICPP at the end of the second quarter was 65,419 square feet. Of this area, 64,684 square feet was designated as permanent and in-use.

ICPP High Contamination Area
CY-96

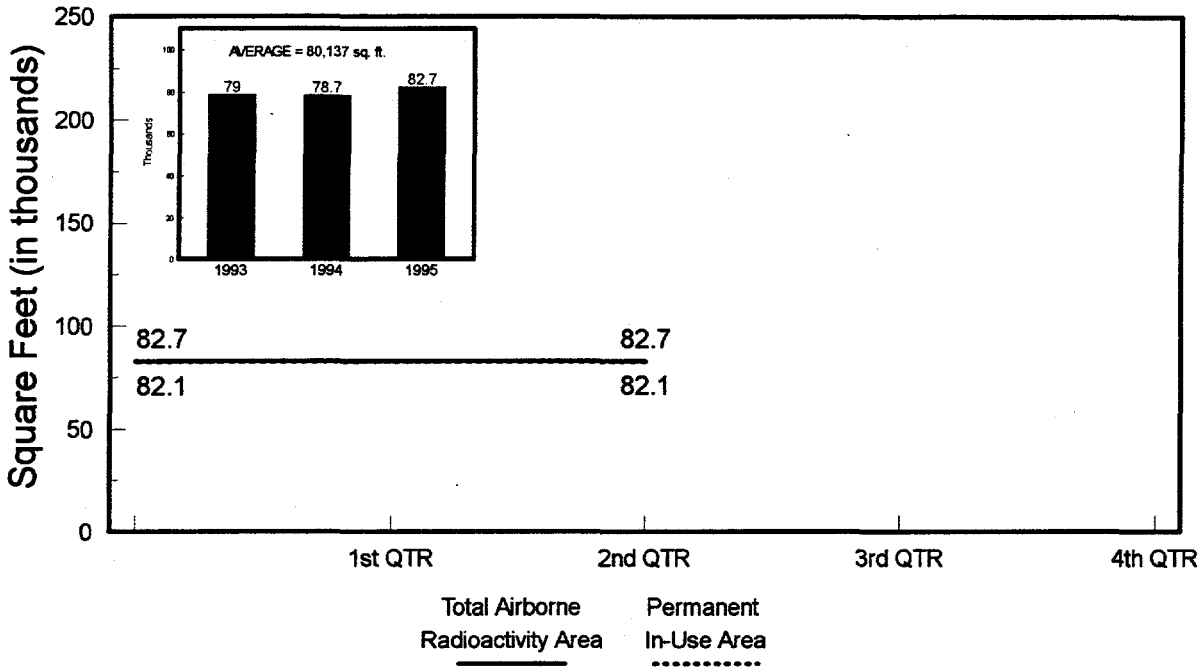


This indicator is used to report the total ICPP area designated as High Contamination Area as defined in Table 2-3 of the INEL RCM.

The total High Contamination Area at the ICPP at the end of the second quarter was 251,961 square feet. Of this area, 251,311 square feet was designated as permanent and in-use.

ICPP Airborne Radioactivity Area

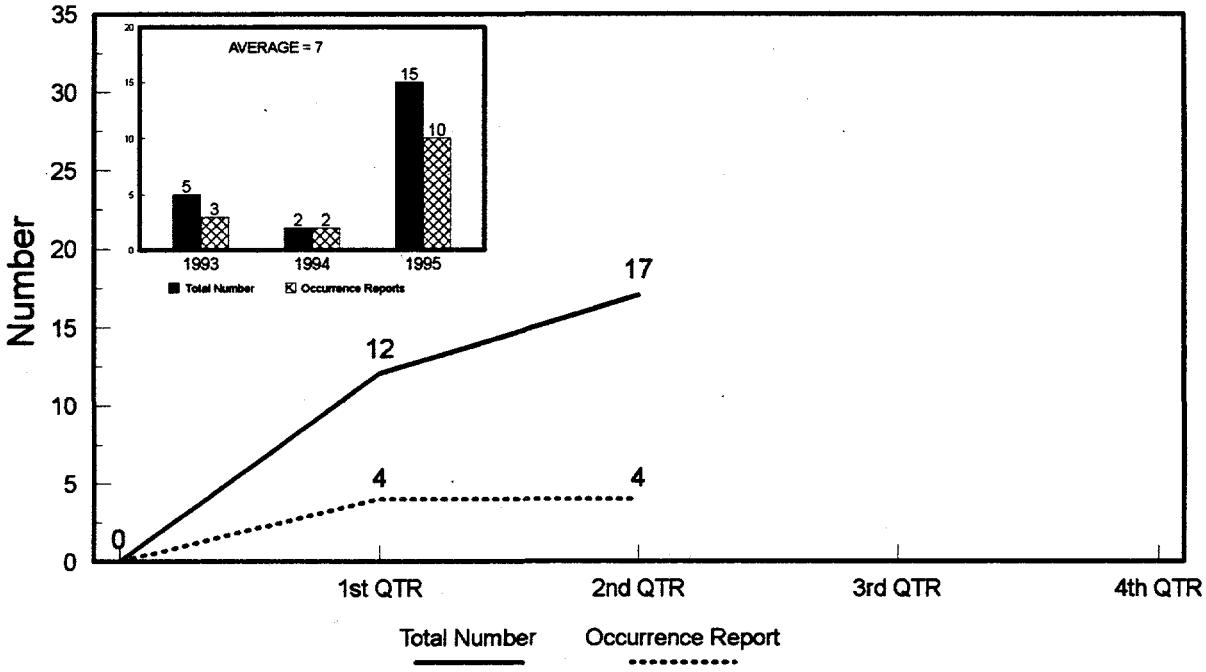
CY-96



This indicator is used to report the total ICPP area designated as Airborne Radioactivity Area as defined in Table 2-3 of the INEL RCM.

The total Airborne Radioactivity Area at the ICPP at the end of the second quarter was 82,712 square feet. Of this area, 82,062 square feet was designated as permanent or in-use.

ICPP Year-to-Date Spills
CY-96



This indicator is used to report inadvertent loss or release of radioactive material.

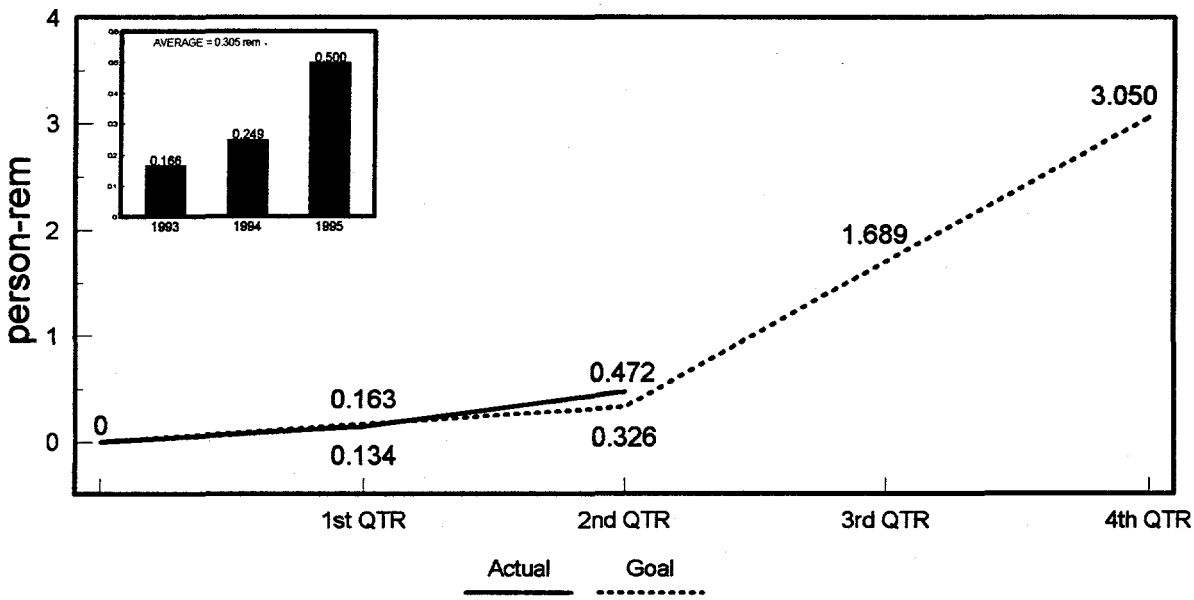
The ICPP had five spills or loss of control of radioactive material during the second quarter, all of which were non-reportable.

Power Burst Facility

Waste Reduction Operations Complex

Waste Experimental Reduction Facility

PBF Collective Year-to-Date Penetrating Radiation Dose
CY-96

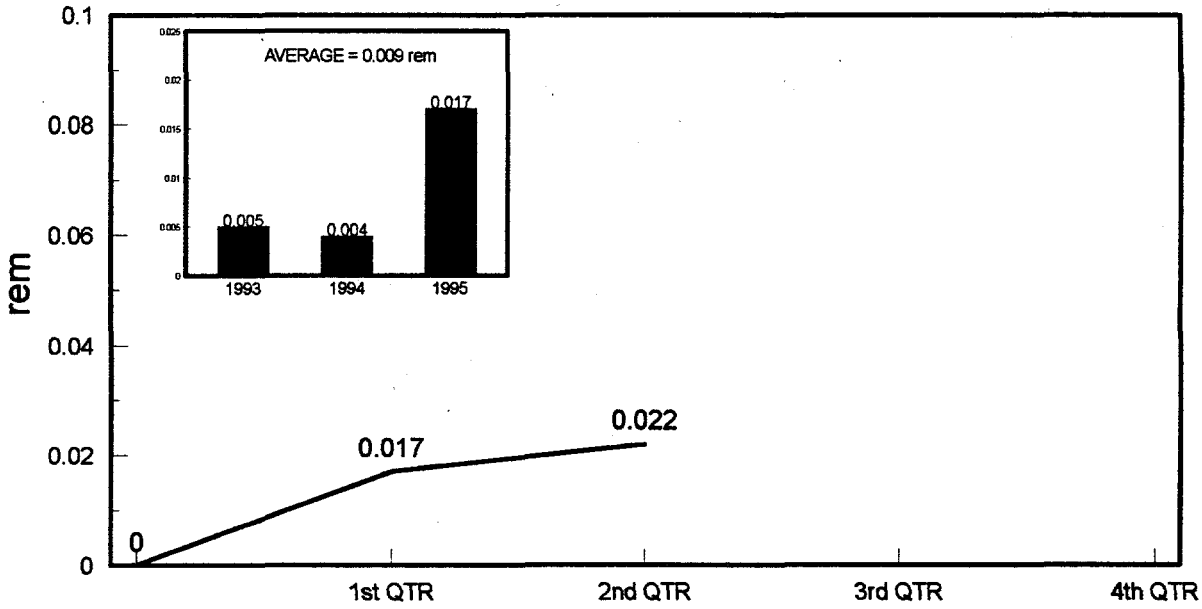


The PBF/WERF/WROC collective occupational radiation exposure through the end of the second quarter was 0.472 person-rem.

Major contributors to the second quarter occupational radiation exposure were the repackaging of mixed waste, sizing low level waste, waste inventory, and receiving and shipping of mixed waste.

NOTE:
Major radiological work activities for PBF were scheduled to begin in June.

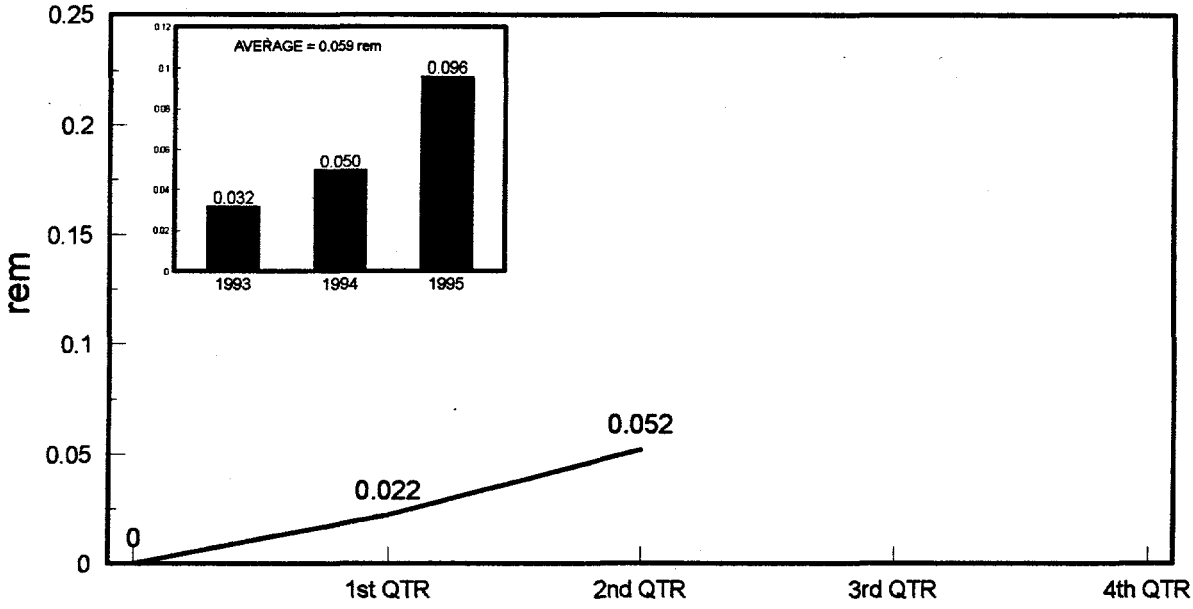
PBF Year-to-Date Average Worker Dose
CY-96



The average worker radiation exposure provides an indication of the effectiveness of the Radiological Control and ALARA Programs.

The average PBF/WERF/WROC occupational radiation exposure through the the end of the second quarter was 0.022 rem. The major sources of exposure were related to mixed waste repacking, sizing, shipping and receiving.

PBF Maximum Year-to-Date Penetrating Dose to a Worker
CY-96

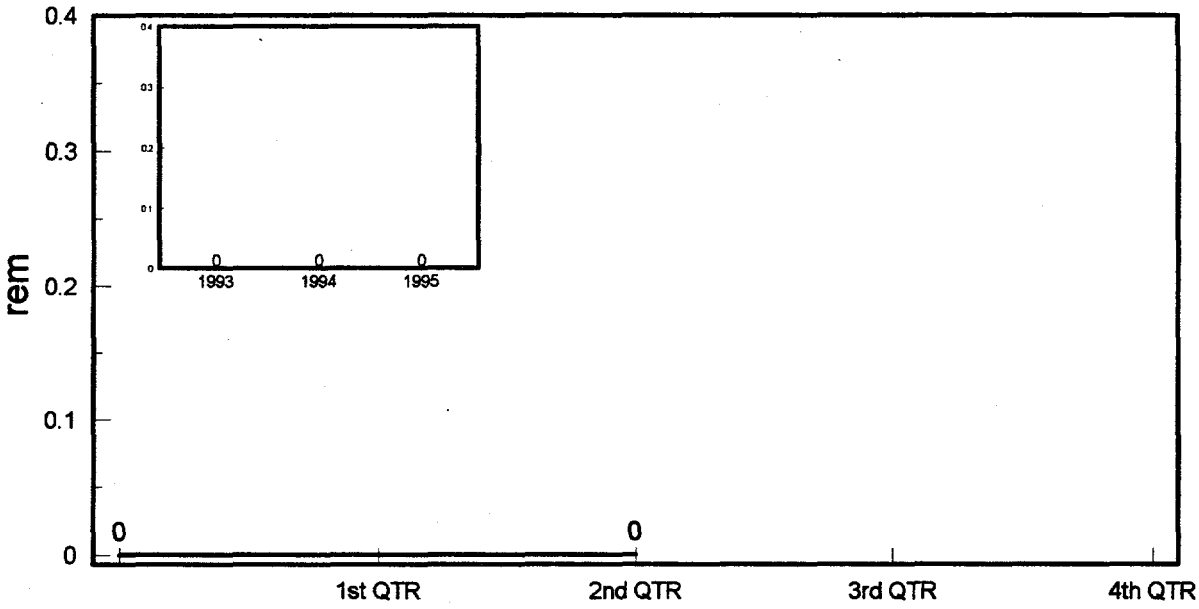


The maximum penetrating radiation dose to a worker provides another indication of how well worker radiation exposure is being managed.

The maximum penetrating radiation dose to a PBF/WERF/WROC worker through the end of the second quarter was 0.052 rem.

PBF Maximum Year-to-Date Neutron Dose to a Worker

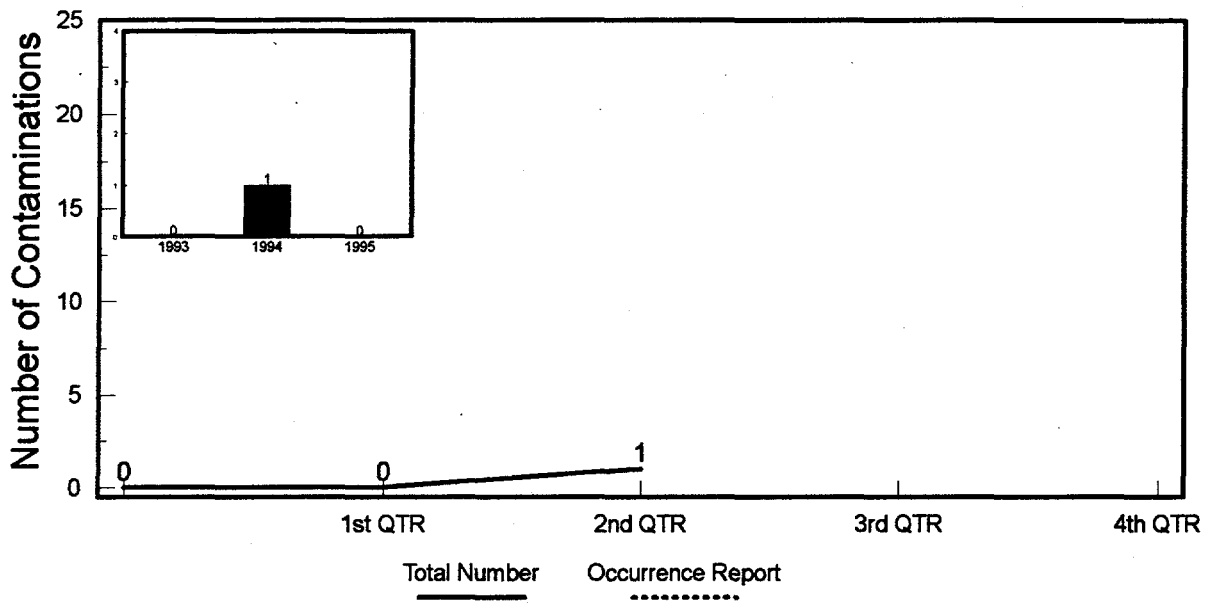
CY-96



The maximum neutron radiation dose to a worker provides an indication of how well occupational exposure to neutron radiation is managed.

The PBF/WERF/WROC maximum neutron radiation dose to a worker through the end of the second quarter was zero rem.

PBF Year-to-Date Skin Contaminations
CY-96

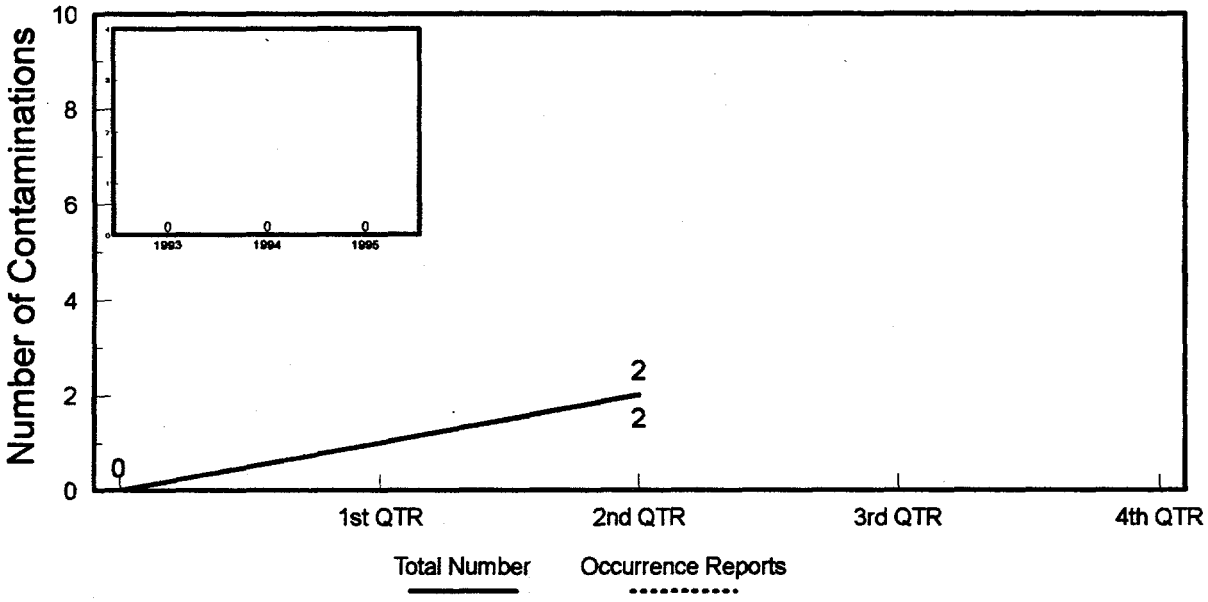


Skin contamination events are a measure of the effectiveness of the radiological protection program, specifically, how well radioactive contamination is controlled.

There were one reportable skin contamination at PBF/WERF/WROC during the second quarter. Detailed information is contained in OR ID-LITC-WERF-1996-0005.

PBF Year-to-Date Clothing Contaminations

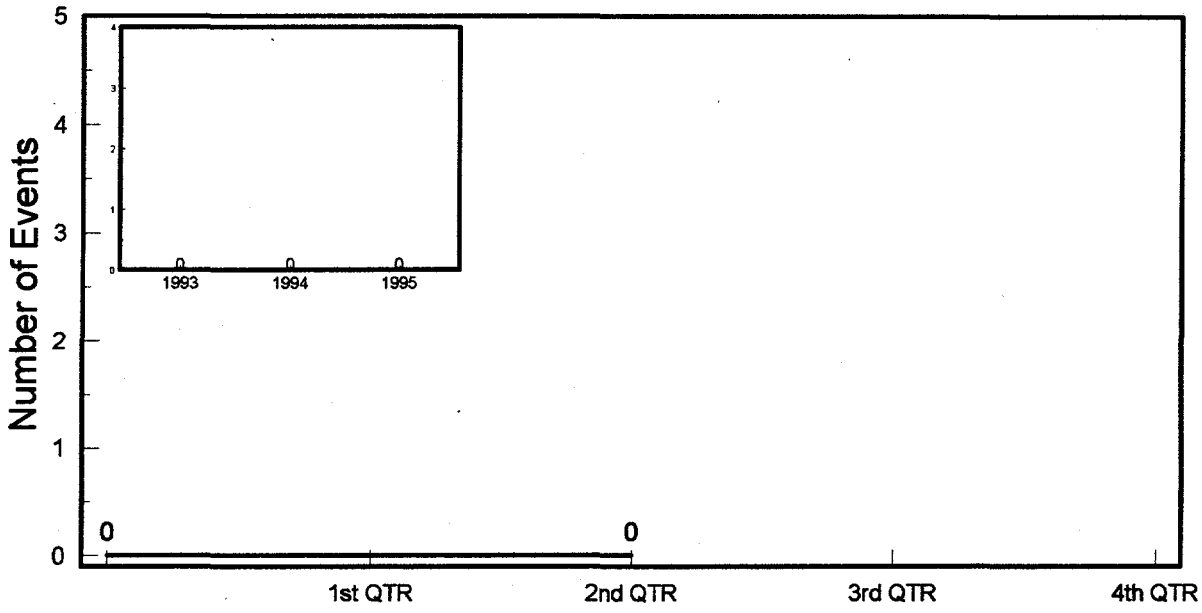
CY-96



Clothing contamination events are a measure of the overall effectiveness of the radiolgical protection program, specifically, how well radioactive contamination is controlled and how well workers adhere to safe radiological work practices.

There were two clothing contaminations at PBF/WERF/WROC during the second quarter, both resulted in ORs. Detailed information is contained in ORs ID-LITC-WERF-1996-0002 and ID-LITC-WERF-1996-0003.

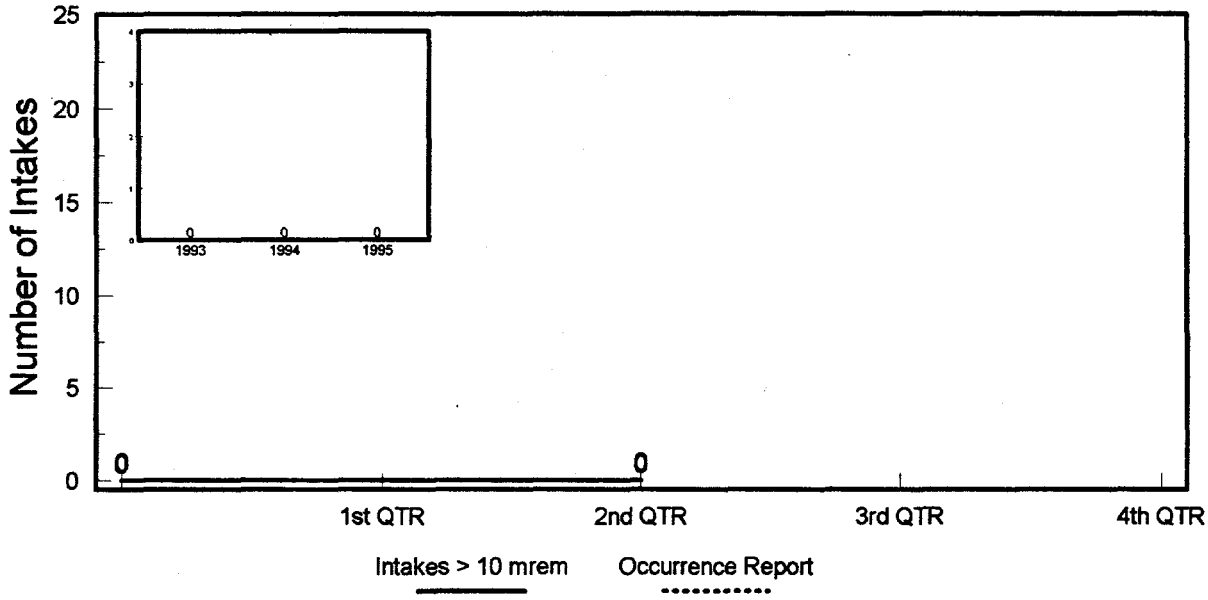
PBF Year-to-Date
Airborne Radioactivity Events
CY-96



Air samplers monitor occupied process and laboratory areas to quantify concentrations of airborne radioactivity. The DOE unit of measure is a DAC. An area which exceeds 10% of one DAC must be posted as an Airborne Radioactivity Area.

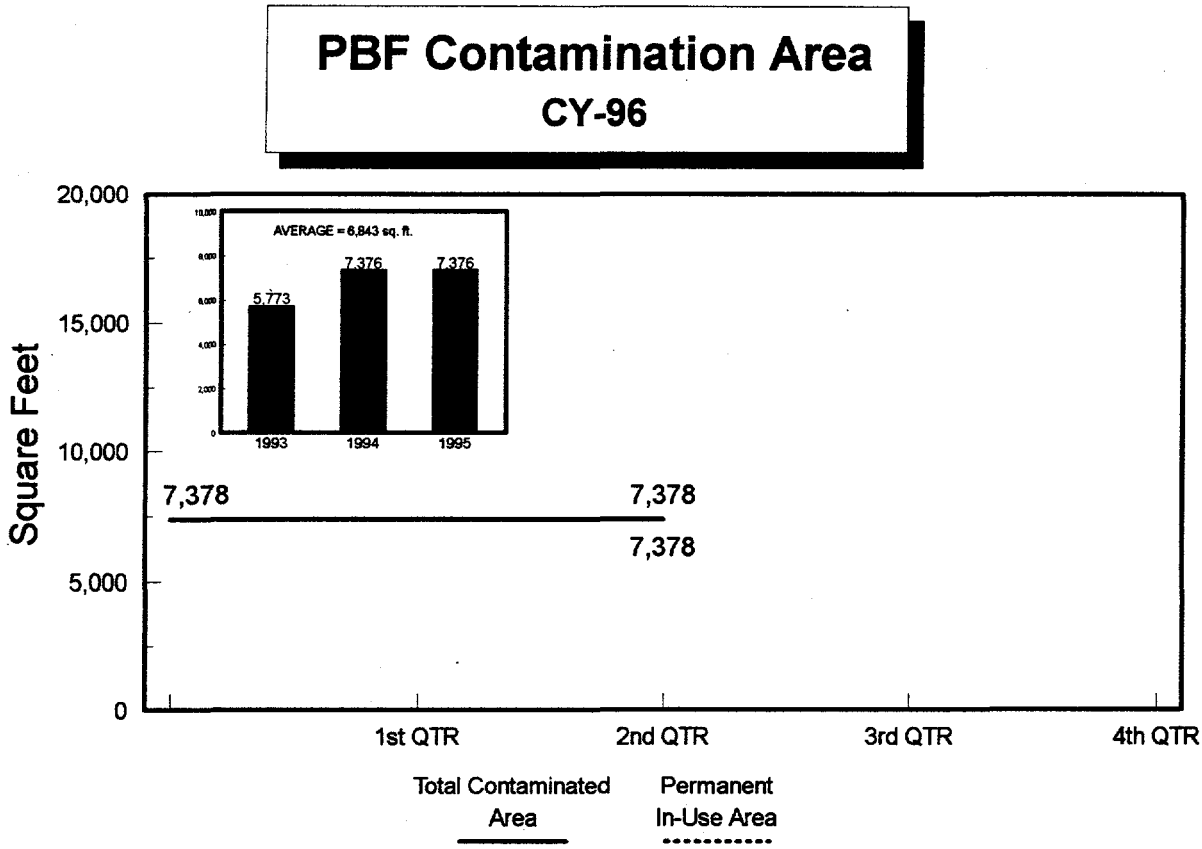
No airborne activity greater than 10% DAC was detected at PBF, WERF, or WROC areas not posted as Airborne Radioactivity Areas during the second quarter.

PBF Year-to-Date
Radioactive Material Intakes
CY-96



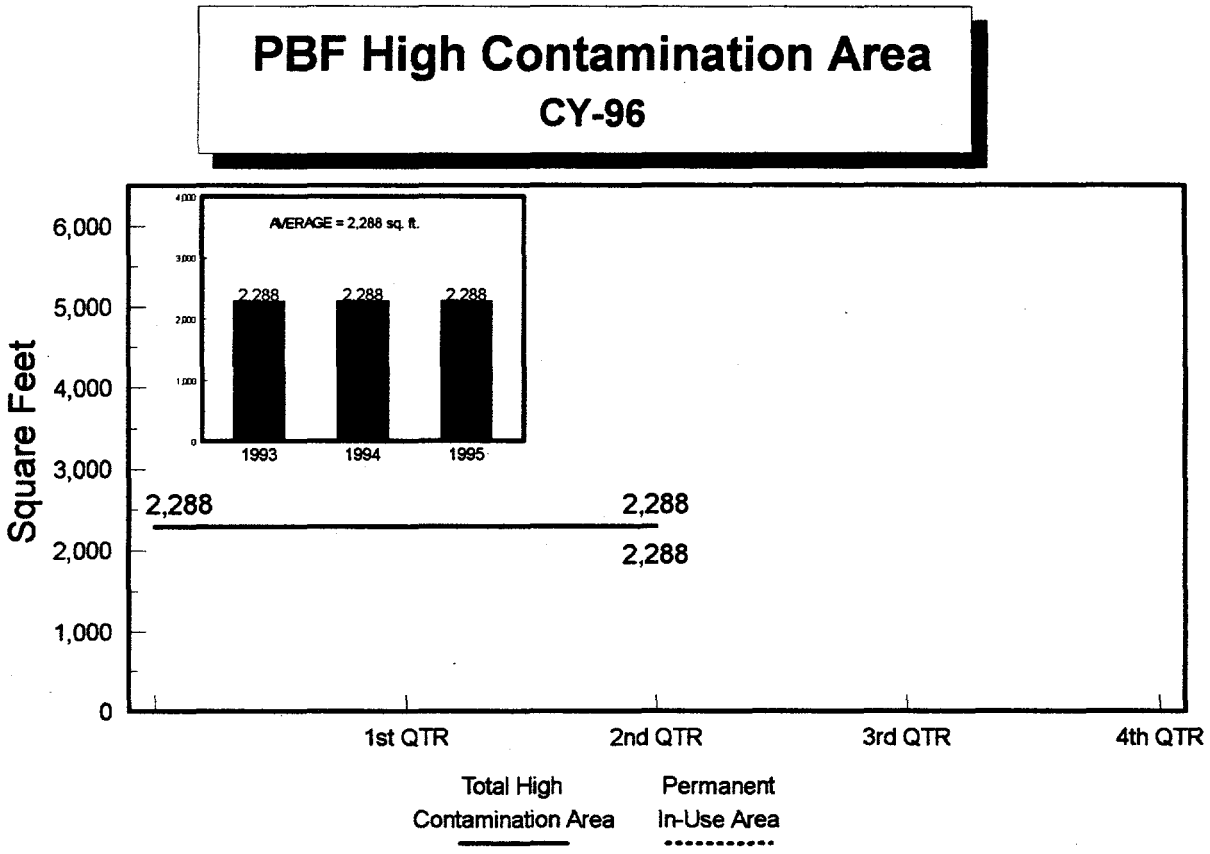
This indicator depicts the number of positive bioassay results that indicate an intake of radioactive material and result in a dose assessment of 10 mrem or greater from PBF, WERF, and WROC during radiological work activities.

There were no positive bioassays indicating an intake of radioactive material that resulted in a dose assessment of 10 mrem or greater at PBF, WERF, or WROC during the second quarter.



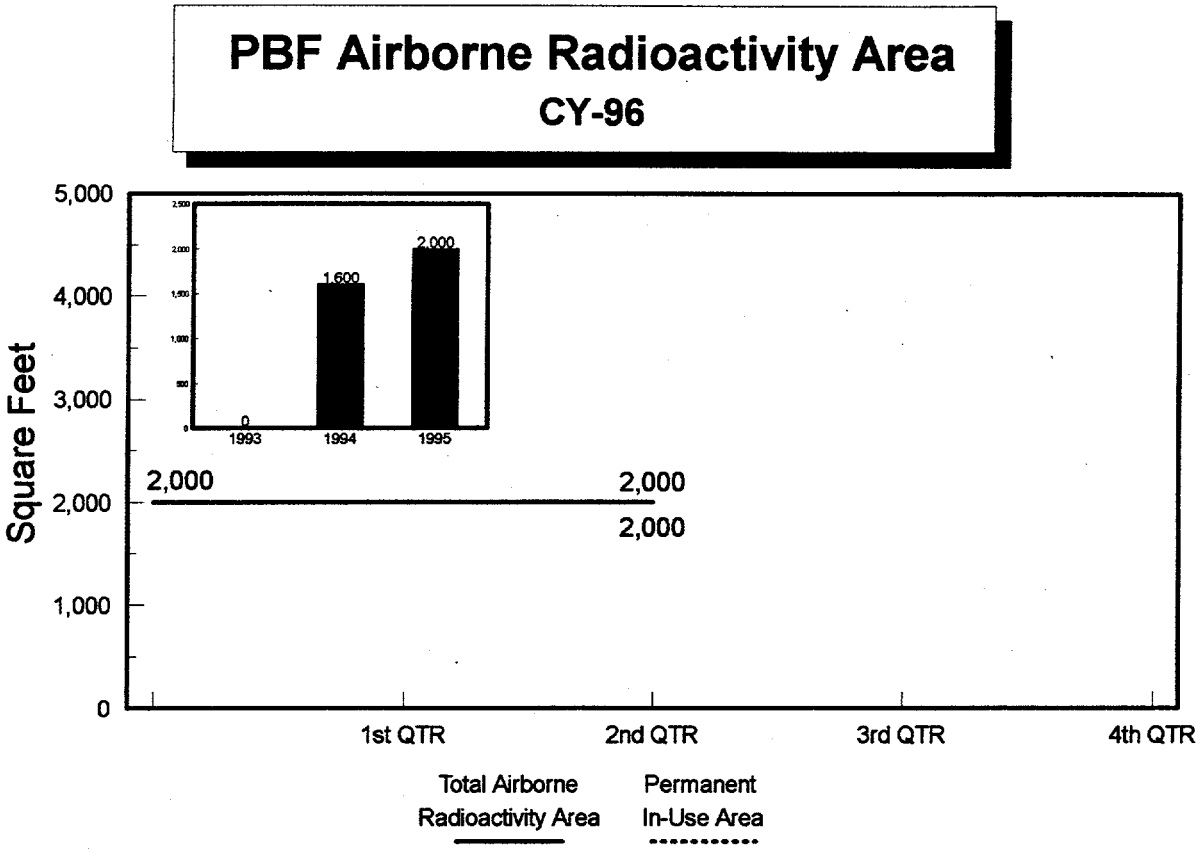
This indicator is used to report the total area designated as Contamination Area as defined in Table 2-3 of the INEL RCM.

The total Contamination Area at PBF, WERF, and WROC at the end of the second quarter was 7,378 square feet. All of this area was designated as permanent and in-use.



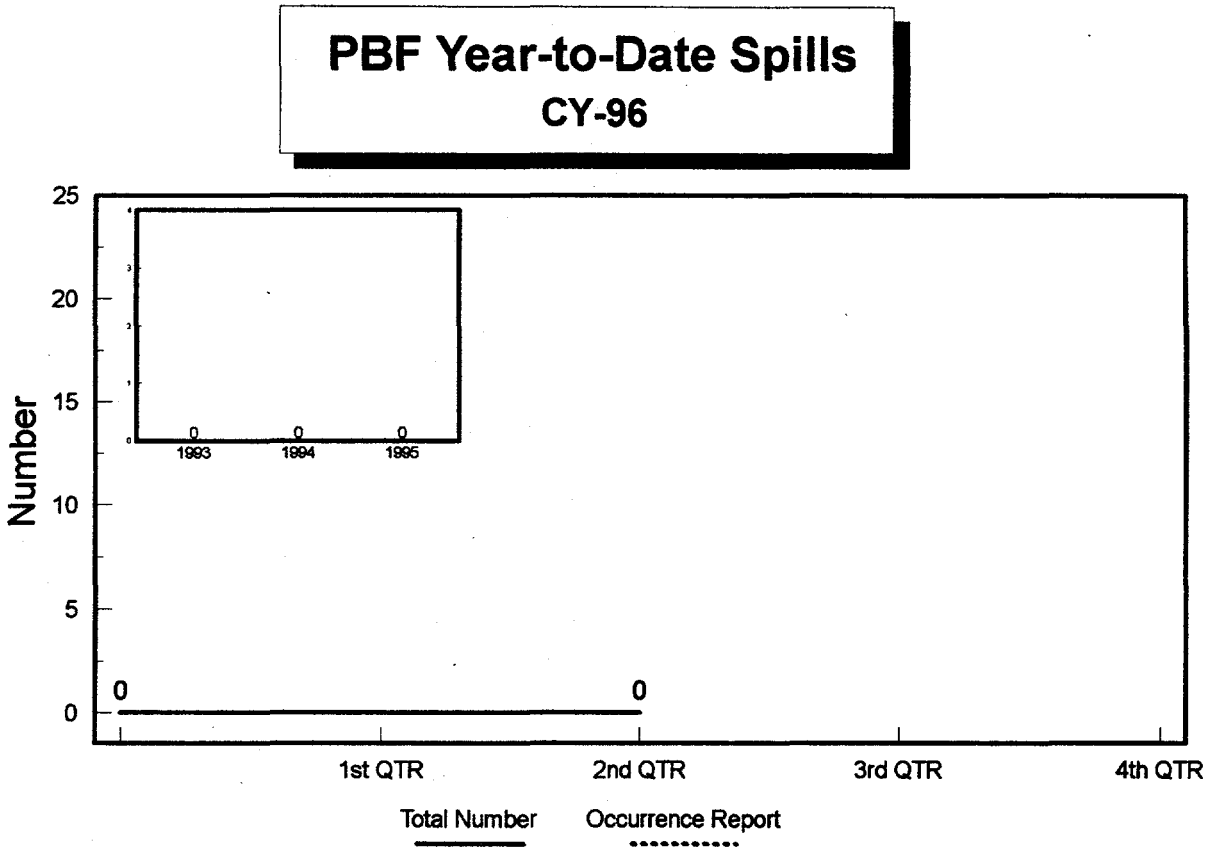
This indicator is used to report the total area designated as High Contamination Area as defined in Table 2-3 of the INEL RCM.

The total High Contamination Area at PBF, WERF, and WROC at the end of the second quarter was 2,288 square feet. All of this area was designated as permanent and in-use.



This indicator is used to report the total area designated as Airborne Radioactivity Area as defined in Table 2-3 of the INEL RCM.

The total Airborne Radioactivity Area at PBF, WERF, and WROC at the end of the second quarter was 2000 square feet. All of this area was designated as permanent or in-use.

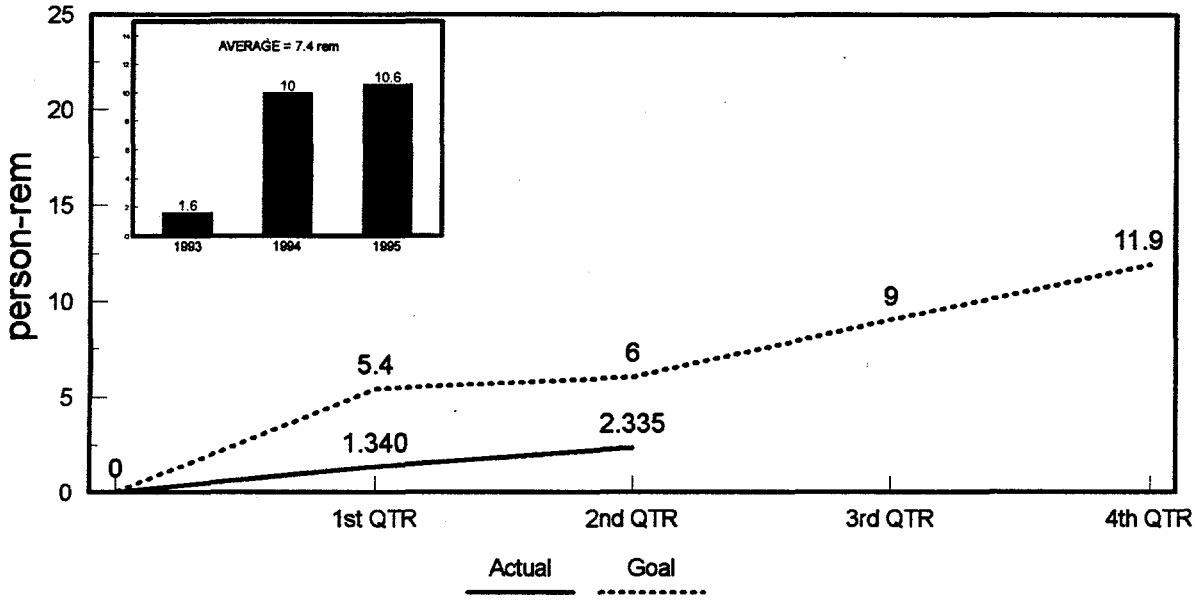


This indicator is used to report inadvertent loss or release of radioactive material.

There were no spills or loss of control of radioactive material at PBF, WERF, or WROC during the second quarter.

Radioactive Waste Management Complex

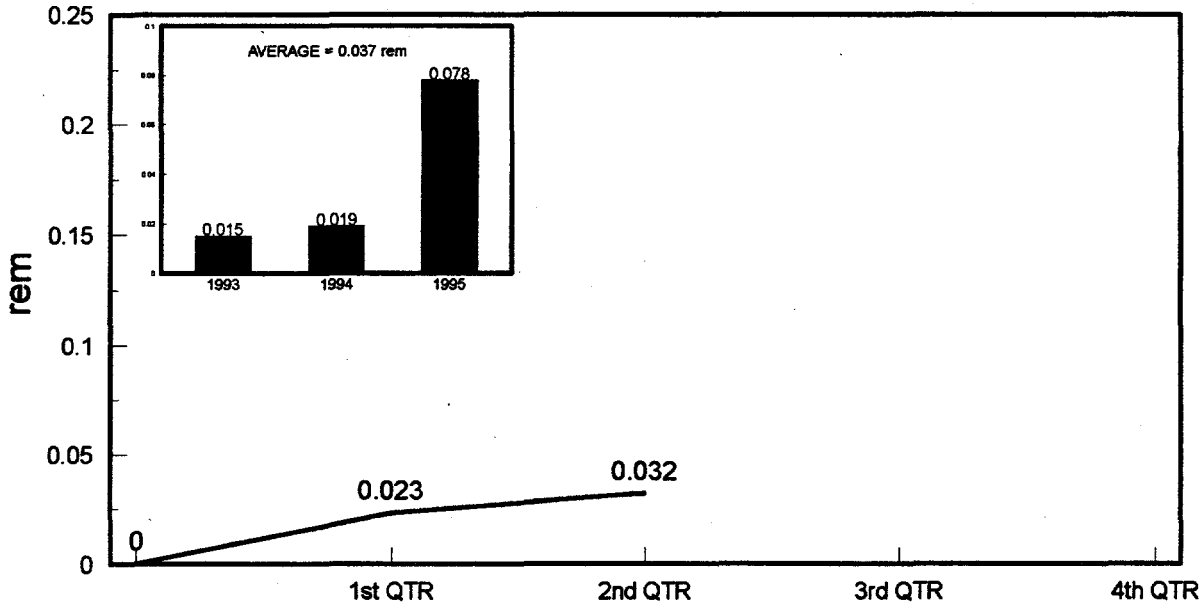
RWMC Collective Year-to-Date Penetrating Radiation Dose
CY-96



The RWMC collective occupational radiation exposure through the end of the second quarter was 2.335 person-rem. The ALARA goal for RWMC was adjusted from 21.5 to 11.9 person-rem during the first quarter.

The major contributors to the second quarter RWMC occupational radiation exposure were waste transfers to storage modules and low-level disposal operations.

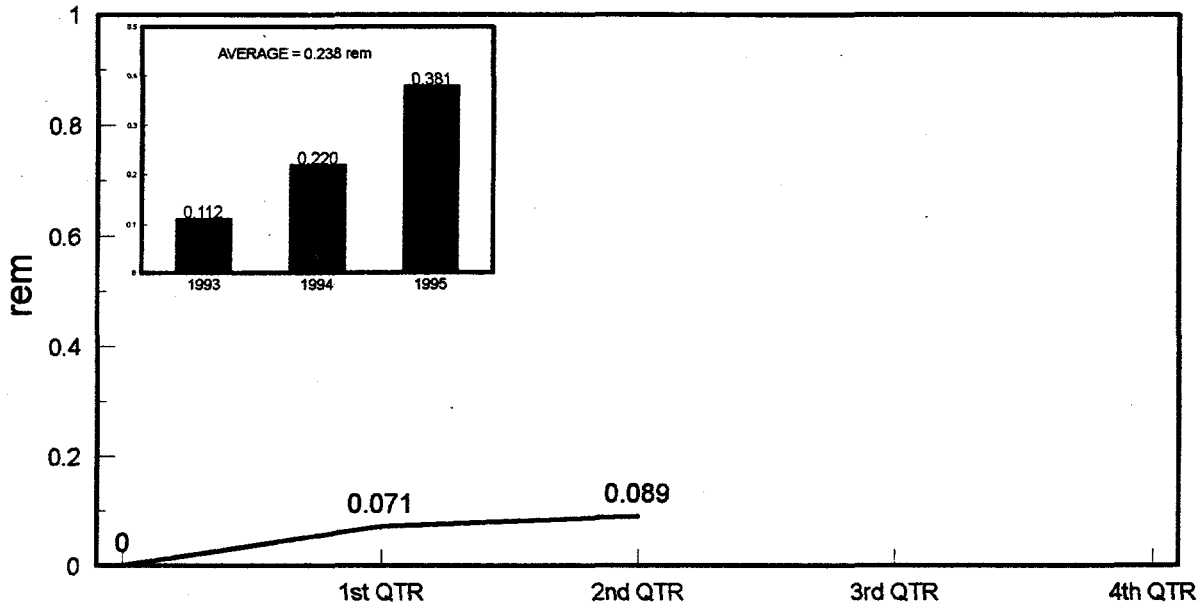
RWMC Year-to-Date Average Worker Dose
CY-96



The average worker radiation exposure provides an indication of the effectiveness of the Radiological Control and ALARA Programs.

The average RWMC occupational radiation exposure through the end of the second quarter was 0.032 rem.

RWMC Maximum Year-to-Date Penetrating Dose to a Worker
CY-96

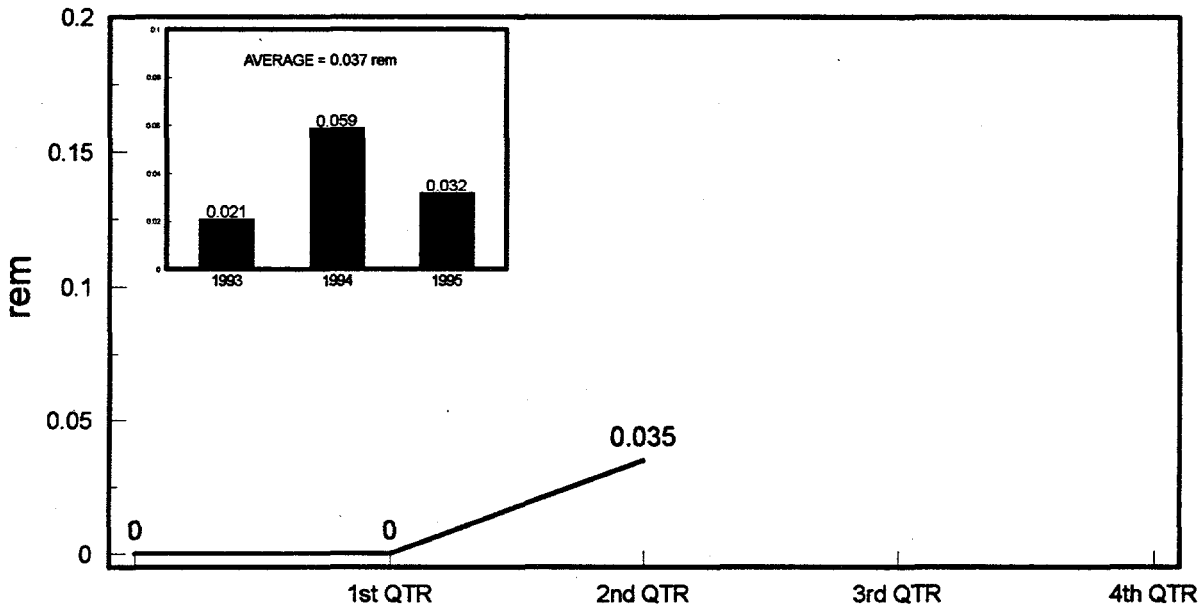


The maximum penetrating radiation dose to a worker provides another indication of how well worker radiation exposure is being managed.

The maximum penetrating radiation dose to a RWMC worker through the end of the second quarter was 0.089 rem.

RWMC Maximum Year-to-Date Neutron Dose to a Worker

CY-96

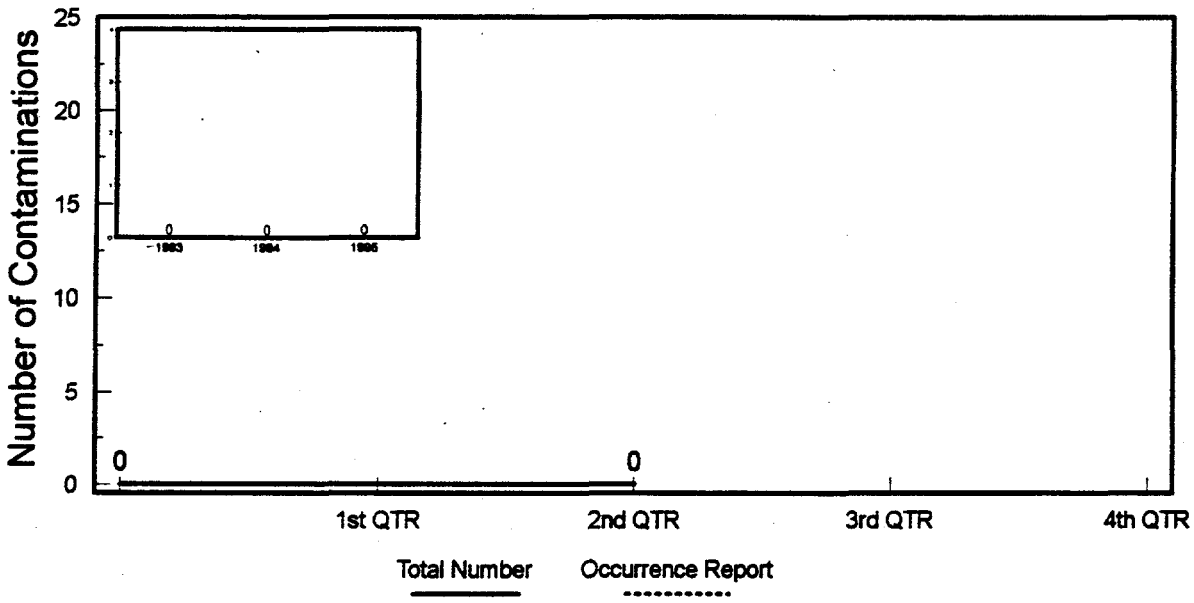


The maximum neutron radiation dose to a worker provides an indication of how well occupational exposure to neutron radiation is managed.

The RWMC maximum neutron radiation dose to a worker through the end of the second quarter was 0.035 rem.

RWMC Year-to-Date Skin Contaminations

CY-96

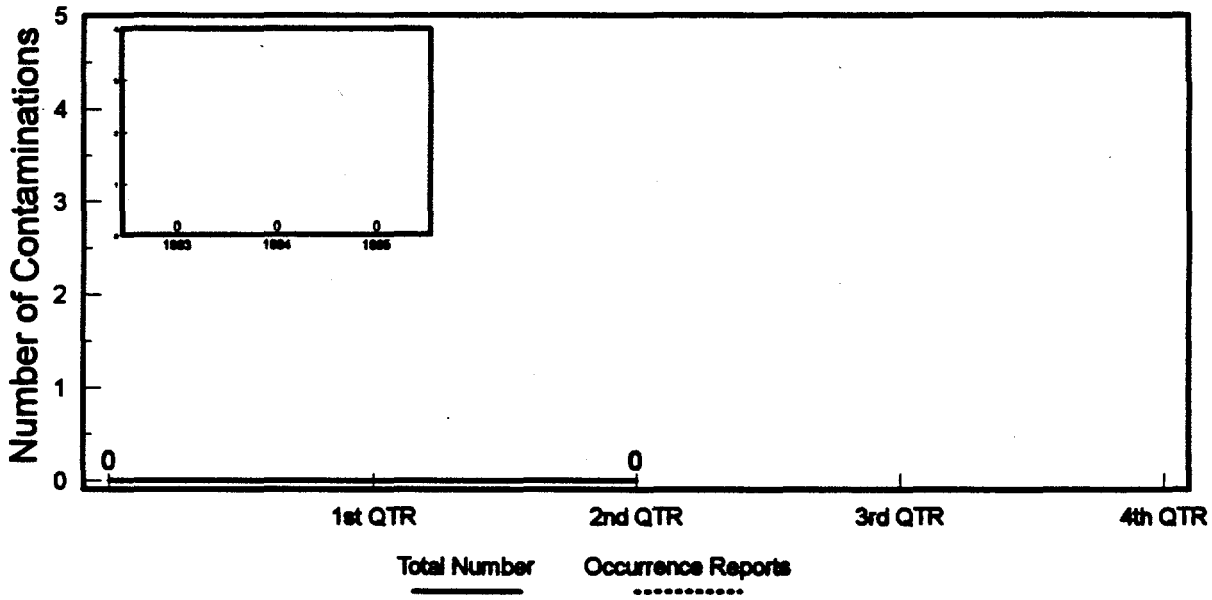


Skin contamination events are a measure of the effectiveness of the radiological protection program, specifically, how well radioactive contamination is controlled.

There were no skin contamination at RWMC through the second quarter.

RWMC Year-to-Date Clothing Contaminations

CY-96

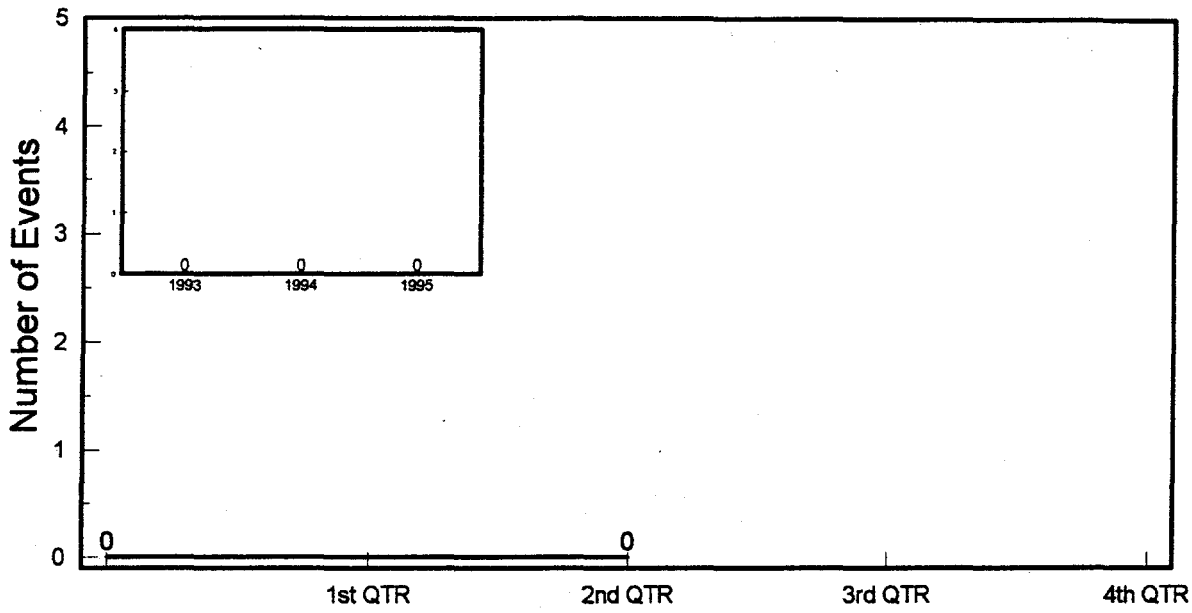


Clothing contamination events are a measure of the overall effectiveness of the radiolgical protection program, specifically, how well radioactive contamination is controlled and how well workers adhere to safe radiological work practices.

There were no clothing contaminations at RWMC through the end of the second quarter.

RWMC Year-to-Date Airborne Radioactivity Events

CY-96

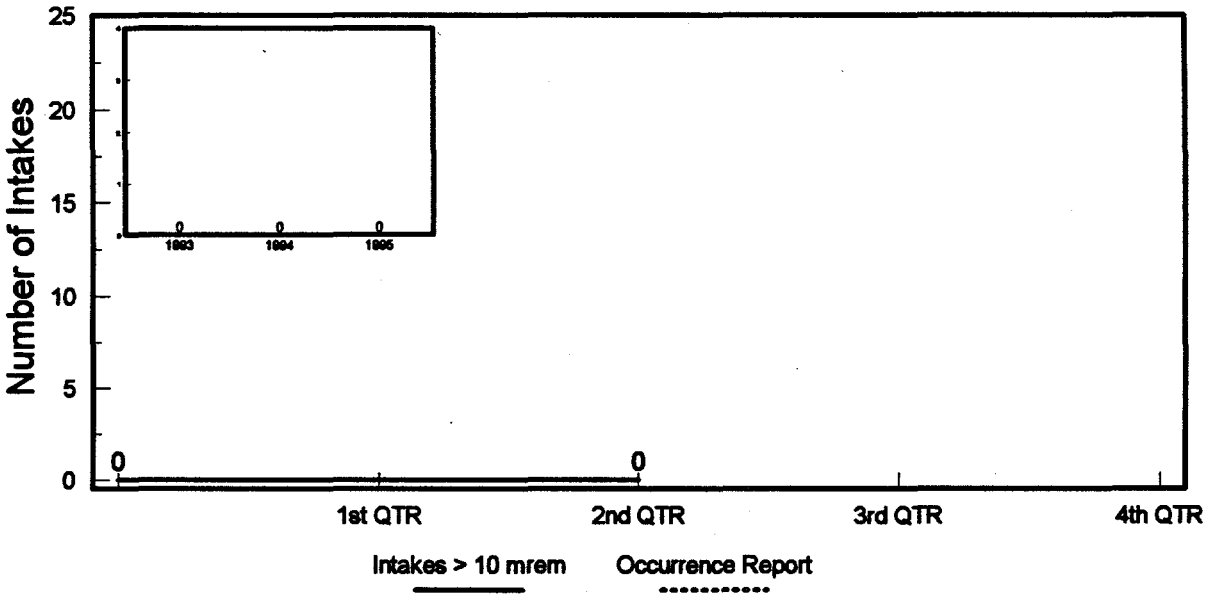


Air samplers monitor occupied process and laboratory areas to quantify concentrations of airborne radioactivity. The DOE unit of measure is a DAC. An area which exceeds 10% of one DAC must be posted as an Airborne Radioactivity Area.

No airborne activity greater than 10% DAC was detected at RWMC in areas not posted as Airborne Radioactivity Areas during the second quarter.

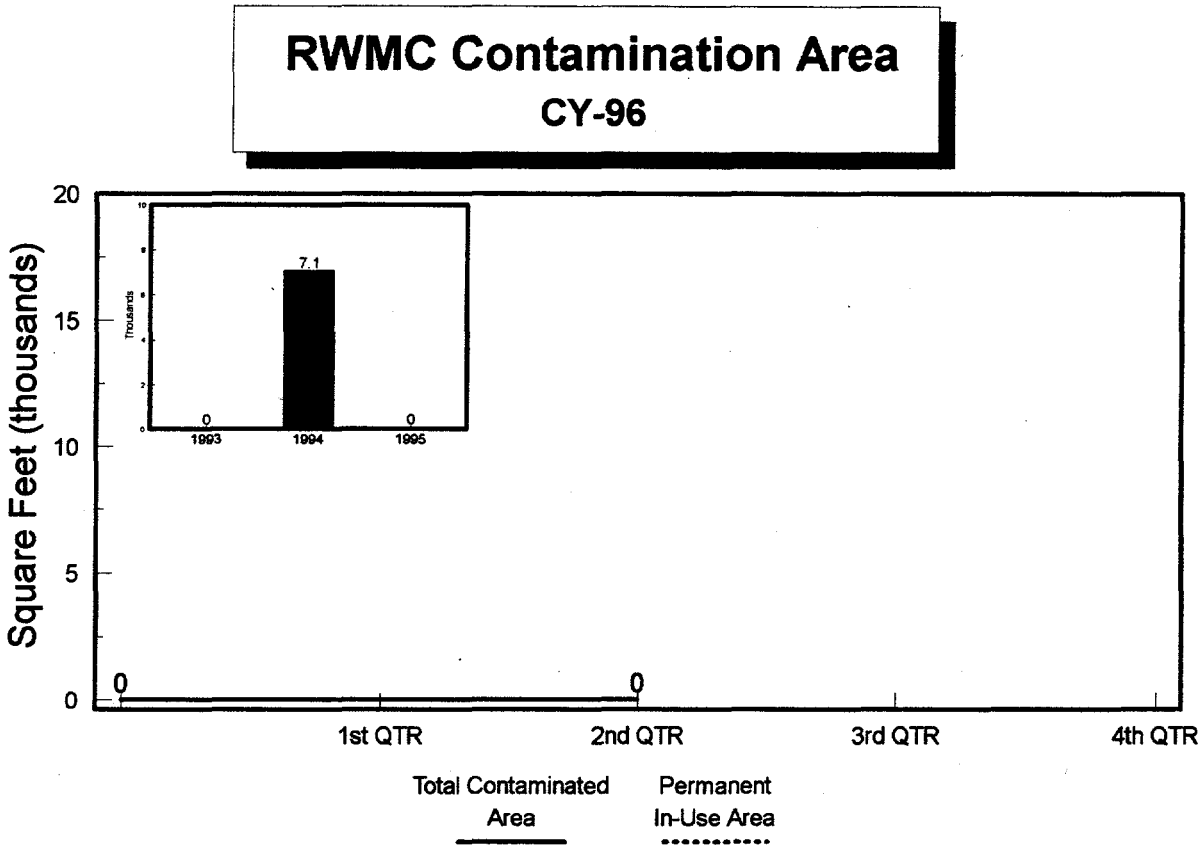
RWMC Year-to-Date Radioactive Material Intakes

CY-96



This indicator depicts the number of positive bioassay results that indicate an intake of radioactive material and result in a dose assessment of 10 mrem or greater from RWMC exposure during occupational work activities.

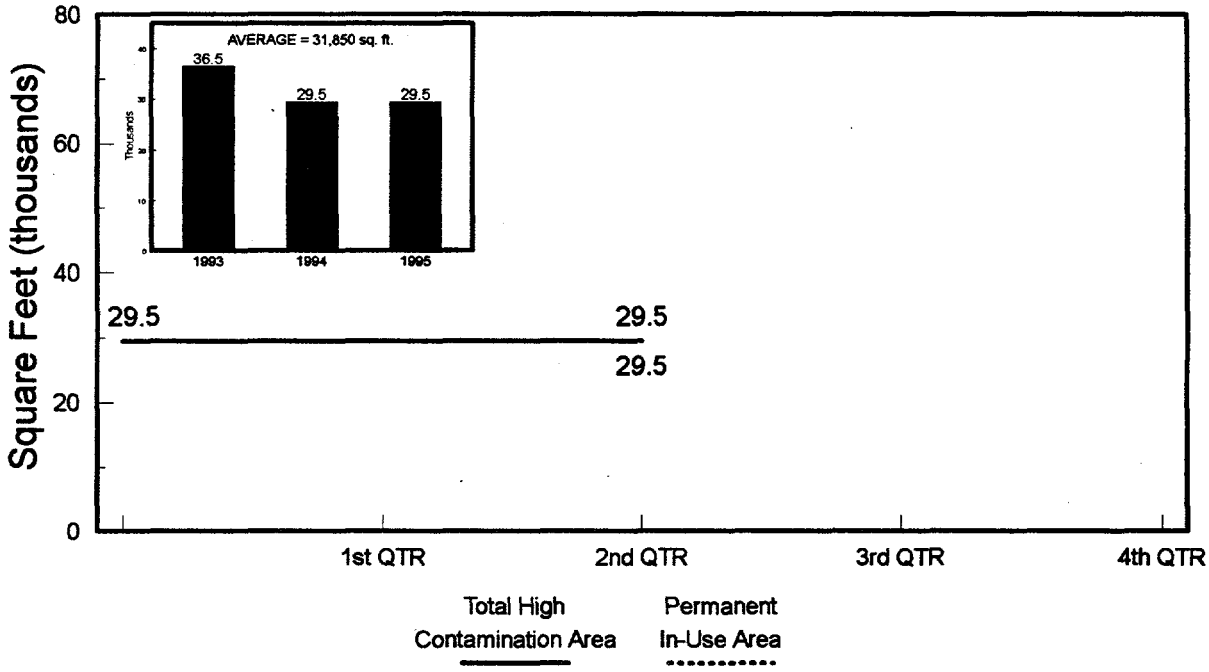
There were no positive bioassays indicating an intake of radioactive material that resulted in a dose assessment of 10 mrem or greater at RWMC during the second quarter.



This indicator is used to report the total area designated as Contamination Area as defined in Table 2-3 of the INEL RCM.

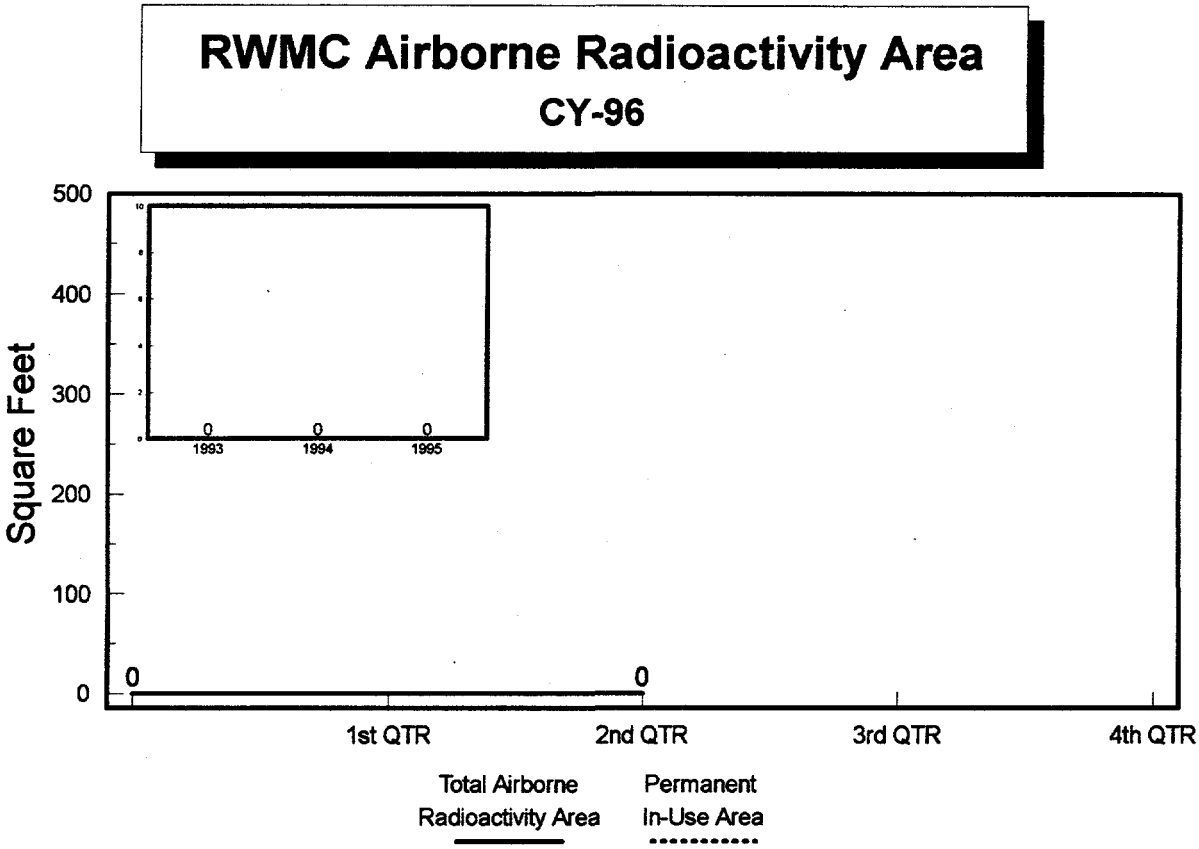
The total Contamination Area at RWMC at the end of the second quarter was zero square feet.

RWMC High Contamination Area
CY-96



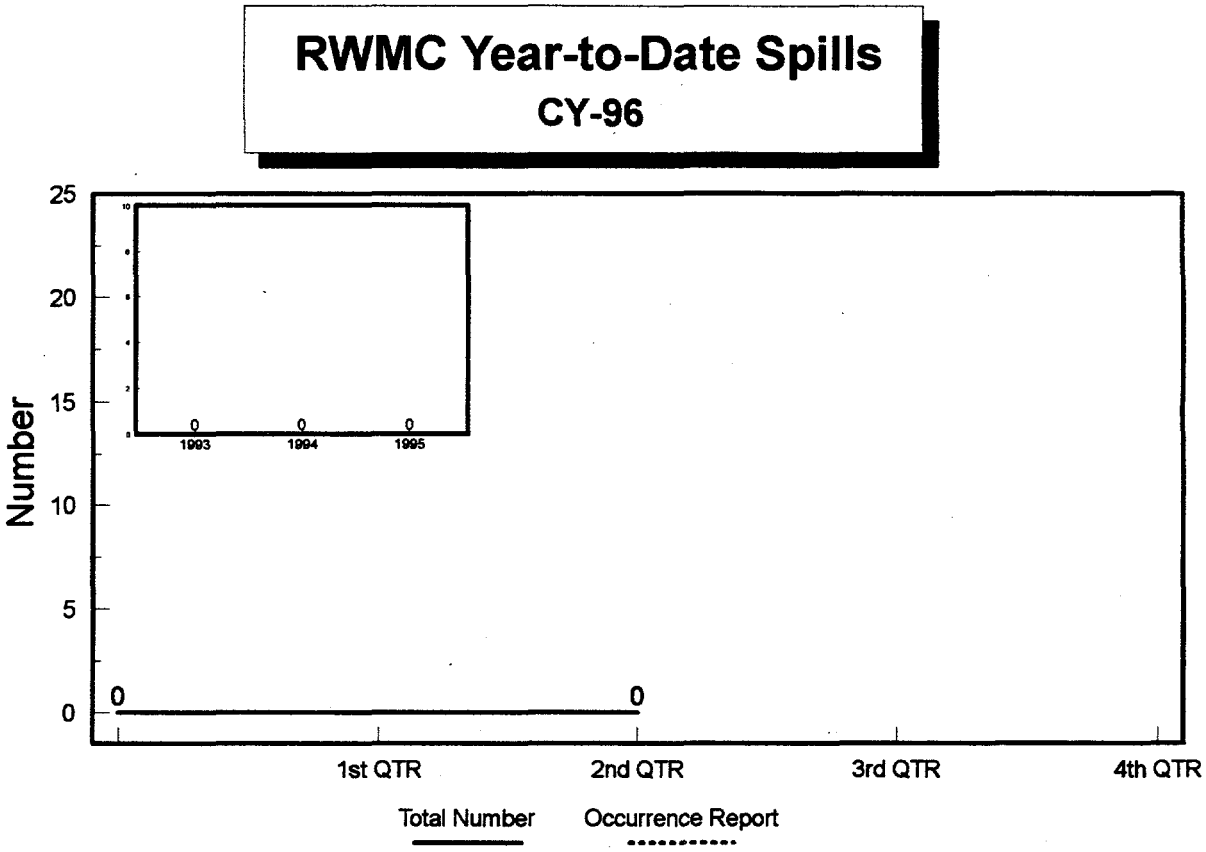
This indicator is used to report the total area designated as High Contamination Area as defined in Table 2-3 of the INEL RCM.

The total High Contamination Area at RWMC at the end of the second quarter was 29,525 square feet. All of this area was designated as permanent and in-use.



This indicator is used to report the total area designated as Airborne Radioactivity Area as defined in Table 2-3 of the INEL RCM.

The total Airborne Radioactivity Area at RWMC at the end of the second quarter was zero square feet.

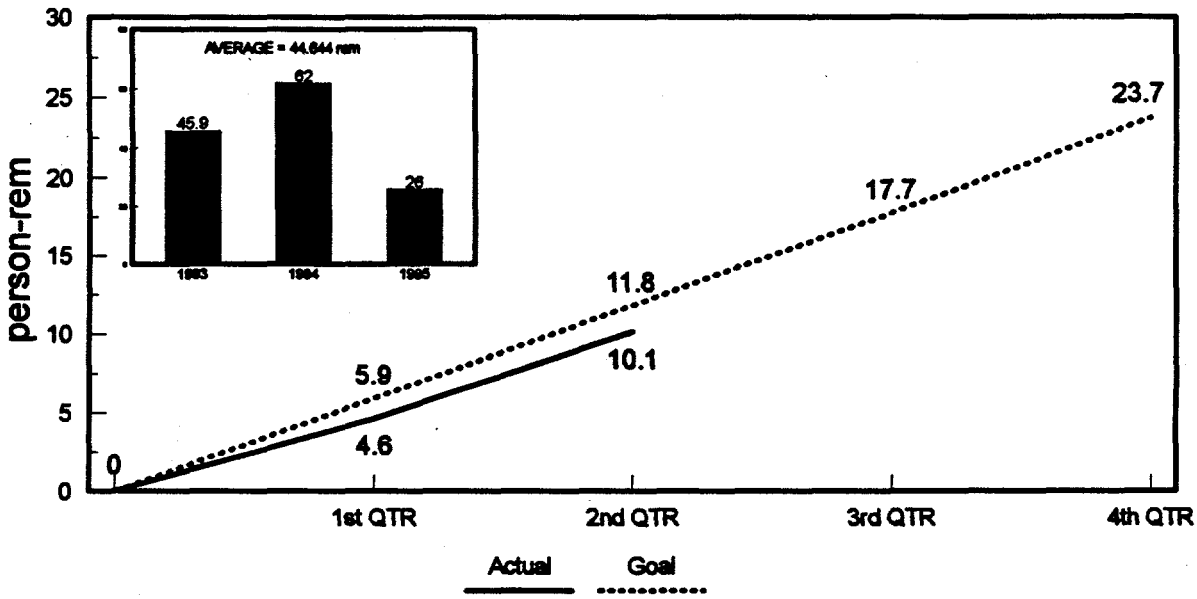


This indicator is used to report inadvertent loss or release of radioactive material.

There were no spills or loss of control of radioactive material during the second quarter at RWMC.

Test Reactor Area

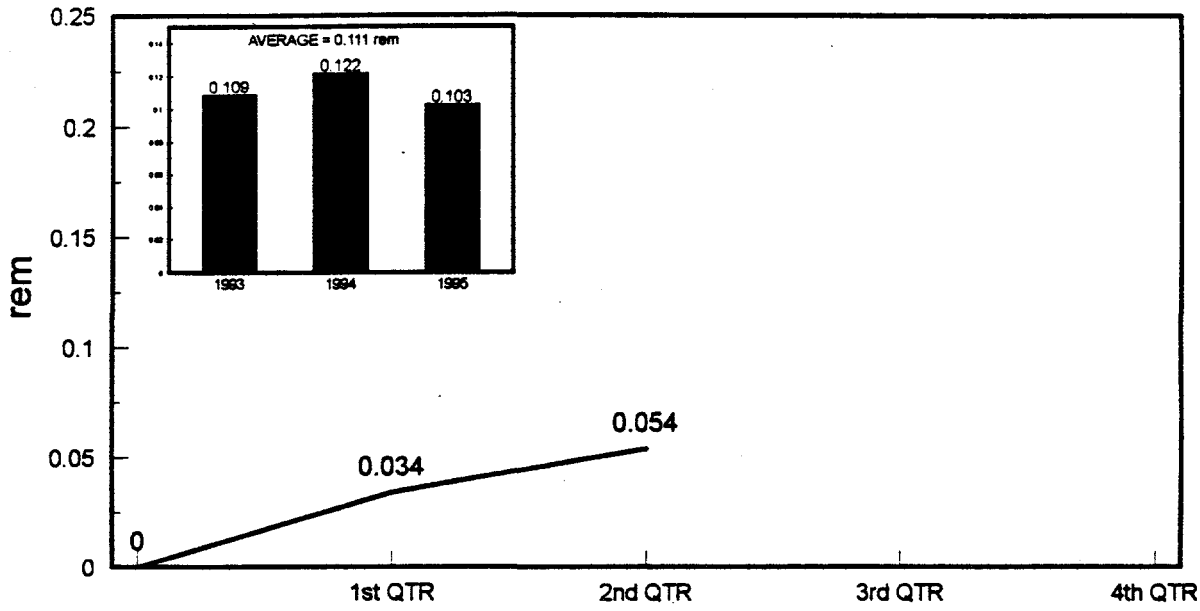
TRA Collective Year-to-Date Penetrating Radiation Dose
CY-96



TRA collective occupational radiation exposure through the end of the second quarter was 10.118 person-rem.

Major contributors to the penetrating radiation at TRA were from ATR outages and normal reactor operations.

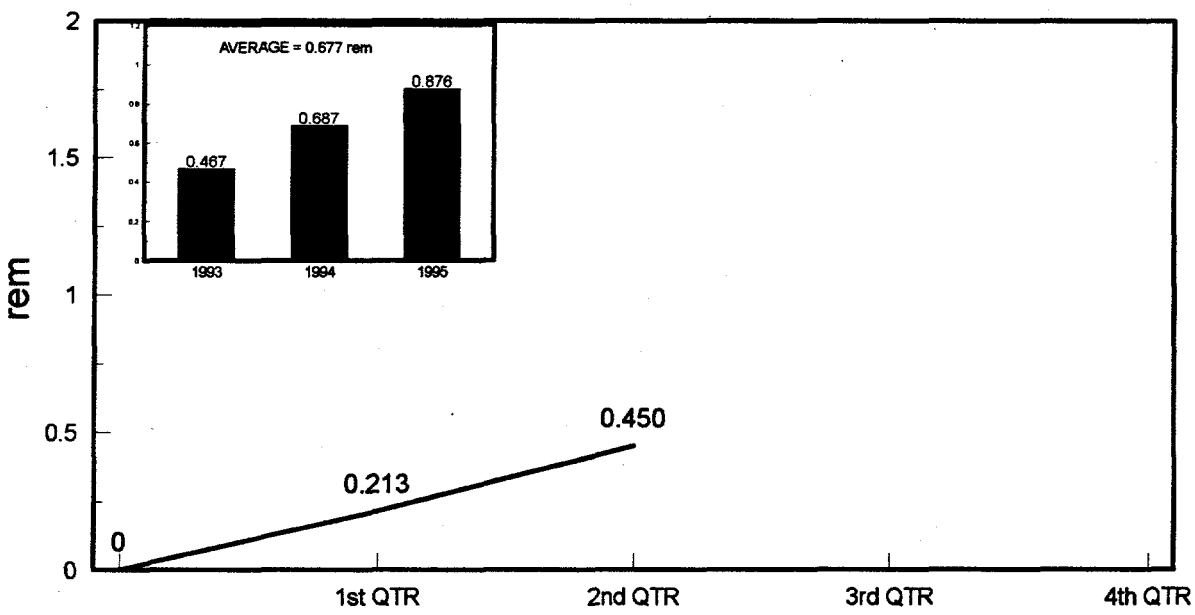
TRA Year-to-Date Average Worker Dose
CY-96



The average worker radiation exposure provides an indication of the effectiveness of the Radiological Control and ALARA Programs.

The average TRA occupational radiation exposure through the end of the second quarter was 0.054 rem.

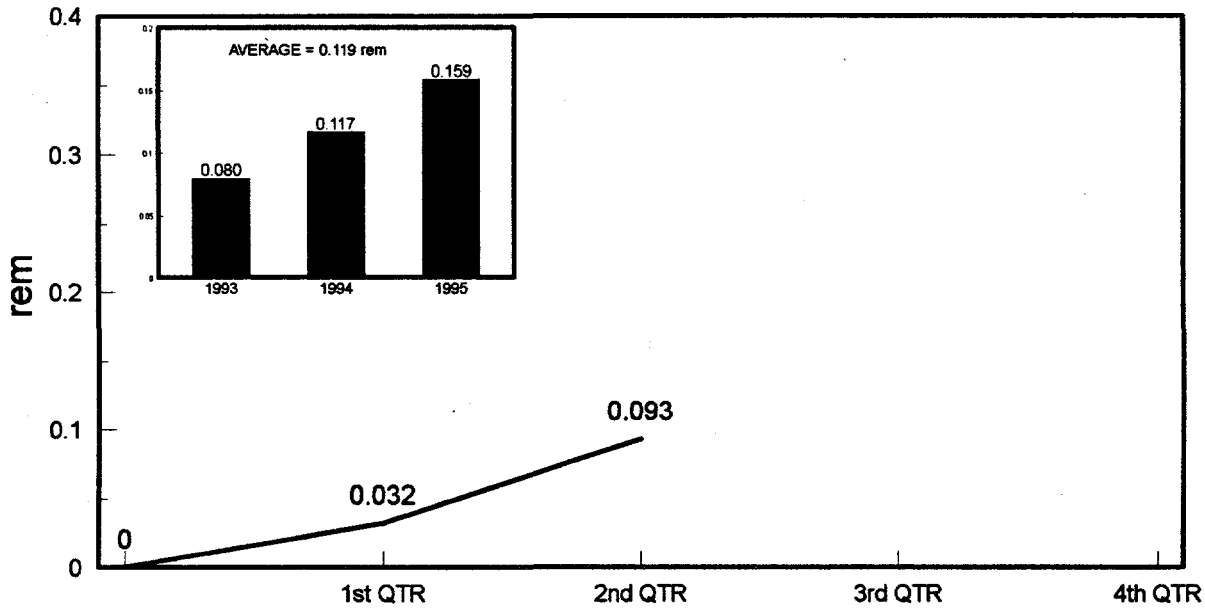
TRA Maximum Year-to-Date Penetrating Dose to a Worker
CY-96



The maximum penetrating radiation dose to a worker provides another indication of how well worker radiation exposure is being managed.

The maximum penetrating radiation dose to a TRA worker through the end of the second quarter was 0.450 rem.

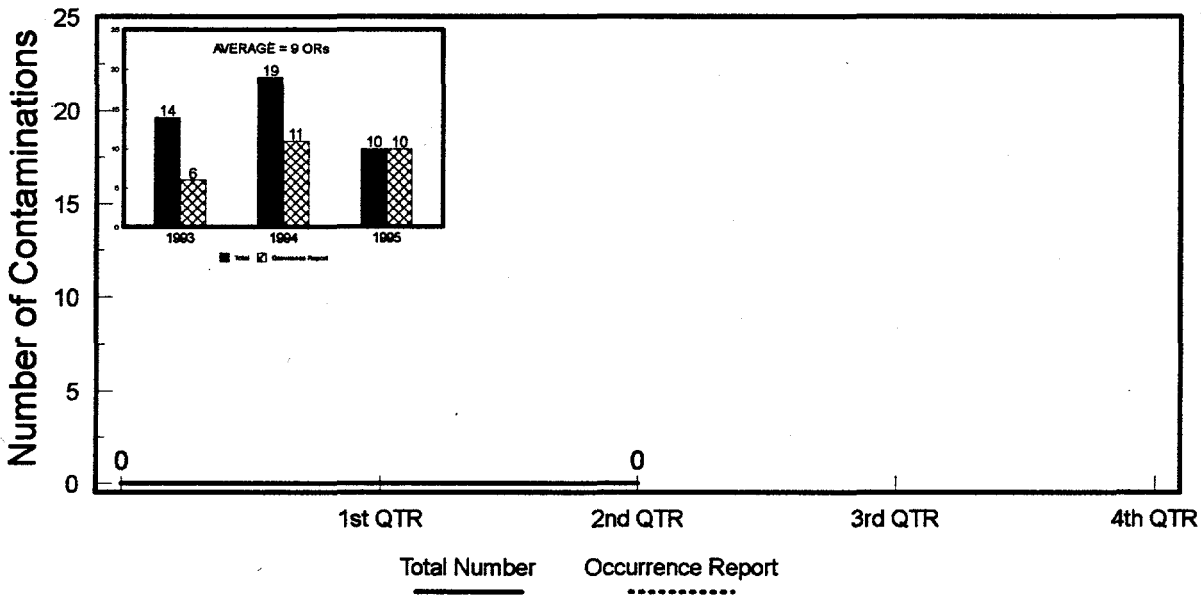
TRA Maximum Year-to-Date Neutron Dose to a Worker
CY-96



The maximum neutron radiation dose to a worker provides an indication of how well occupational exposure to neutron radiation is managed.

The TRA maximum neutron radiation dose to a worker through the end of the second quarter was 0.093 rem.

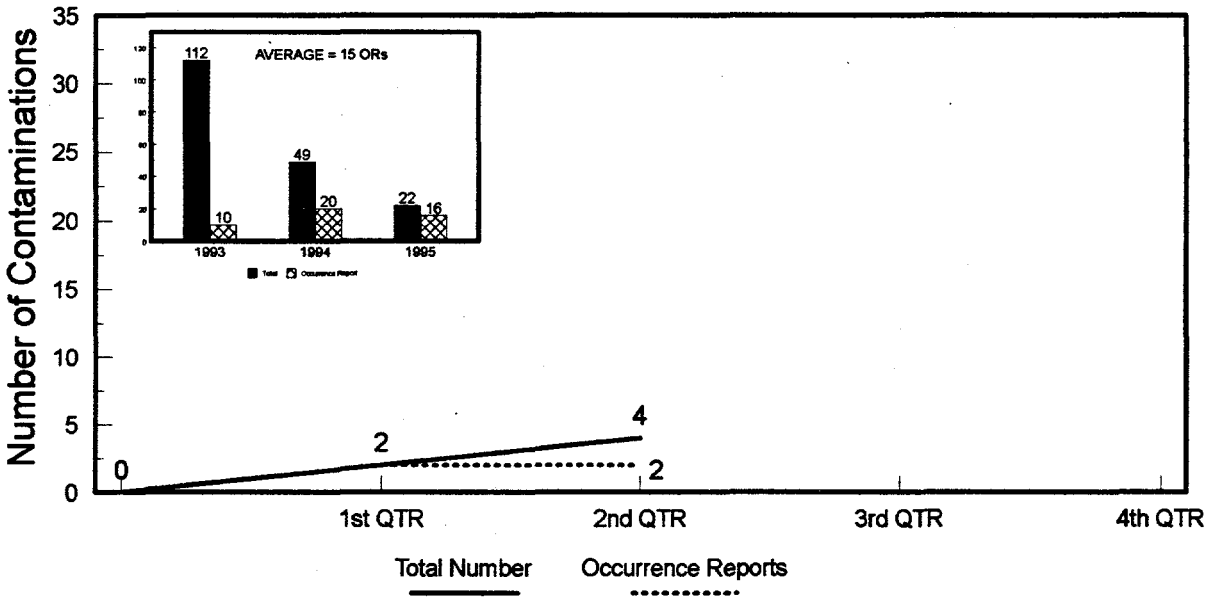
TRA Year-to-Date Skin Contaminations
CY-96



Skin contamination events are a measure of the effectiveness of the radiological protection program, specifically, how well radioactive contamination is controlled.

There were no skin contaminations at TRA through the second quarter.

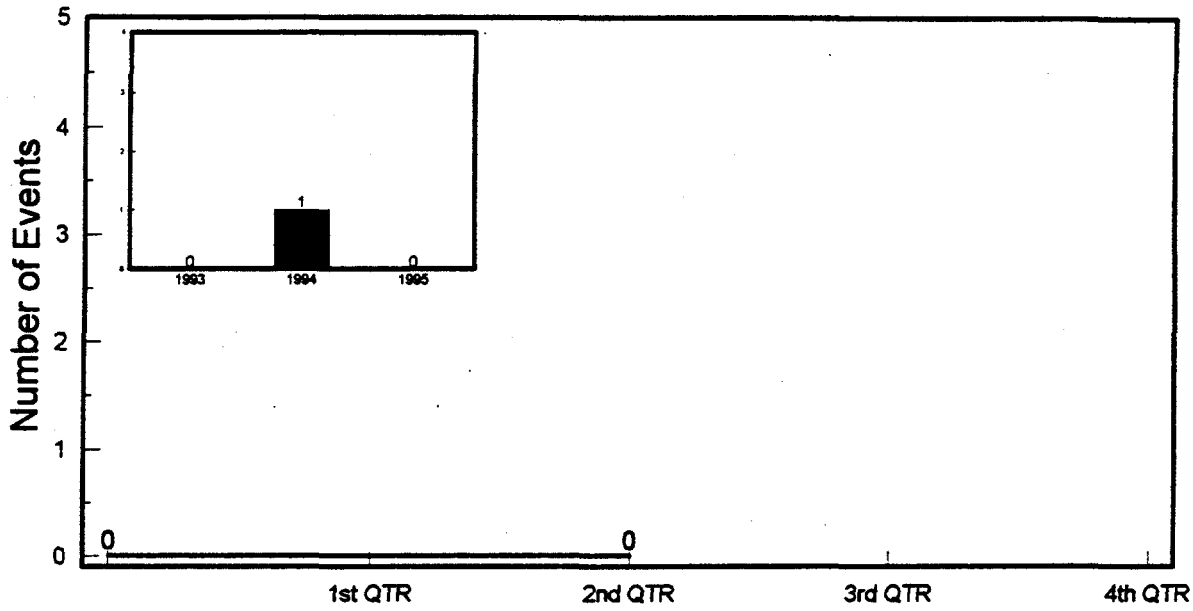
TRA Year-to-Date Clothing Contaminations
CY-96



Clothing contamination events are a measure of the overall effectiveness of the radiolgical protection program, specifically, how well radioactive contamination is controlled and how well workers adhere to safe radiological work practices.

There were two non-reportable clothing contaminations at TRA during the second quarter.

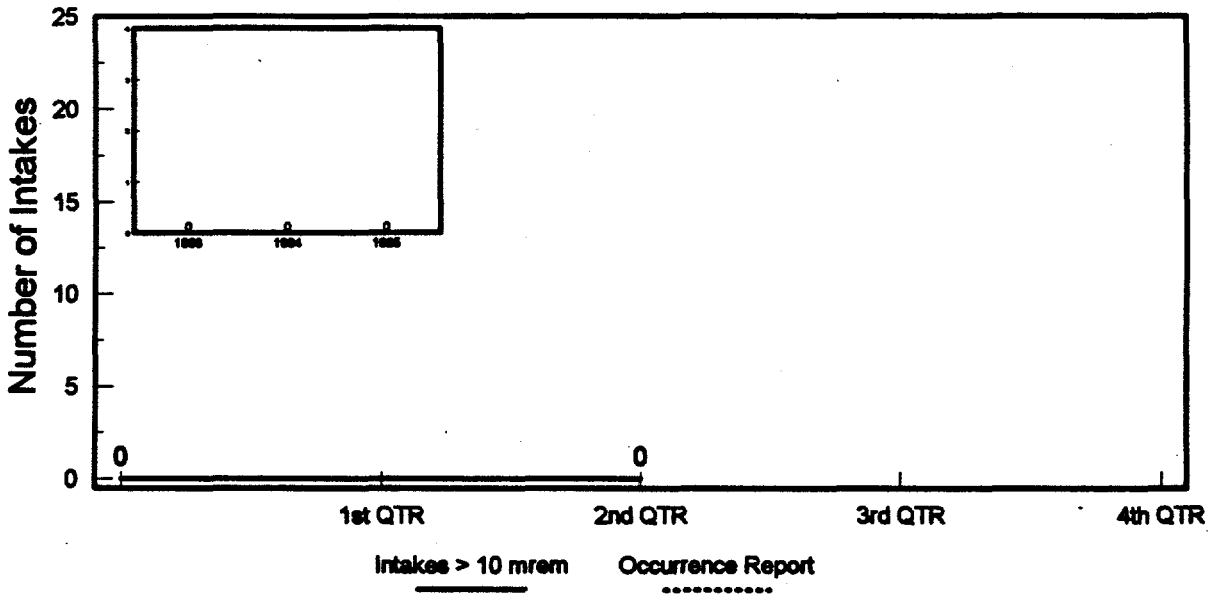
TRA Year-to-Date
Airborne Radioactivity Events
CY-96



Air samplers monitor occupied process and laboratory areas to quantify concentrations of airborne radioactivity. The DOE unit of measure is a DAC. An area which exceeds 10% of one DAC must be posted as an Airborne Radioactivity Area.

No airborne activity greater than 10% DAC was detected at TRA in areas not posted as Airborne Radioactivity Areas during the second quarter.

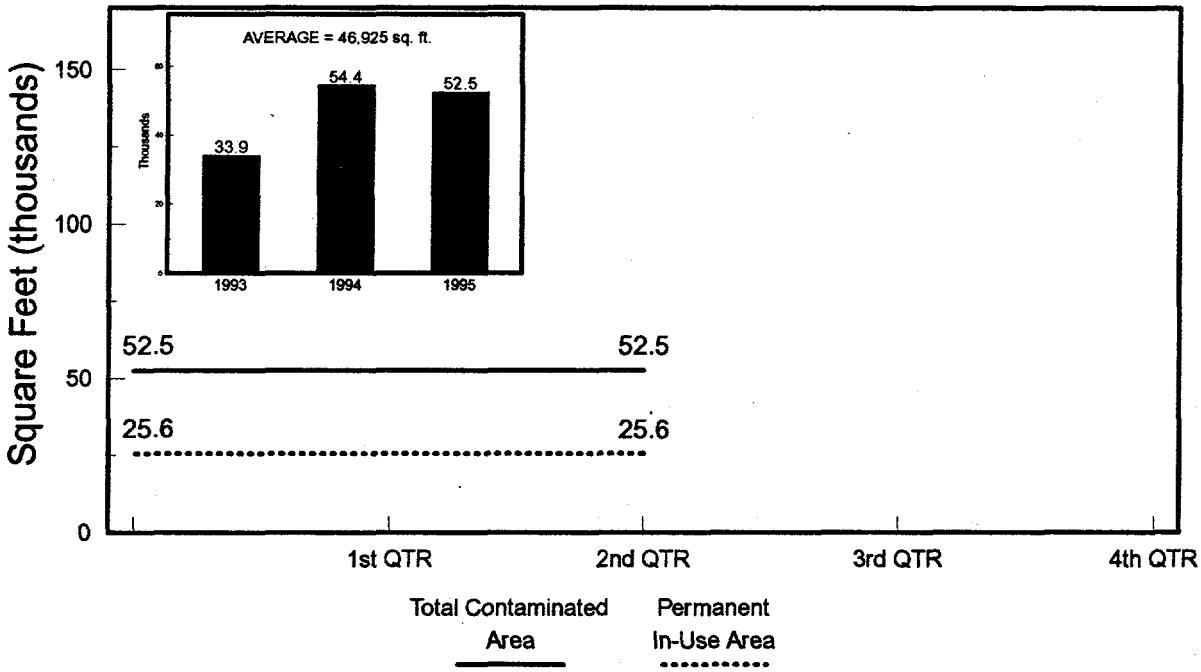
TRA Year-to-Date Radioactive Material Intakes
CY-96



This indicator depicts the number of positive bioassay results that indicate an intake of radioactive material and result in a dose assessment of 10 mrem or greater from TRA exposure during occupational work activities.

There were no positive bioassays indicating an intake of radioactive material that resulted in a dose assessment of 10 mrem or greater at TRA during the second quarter.

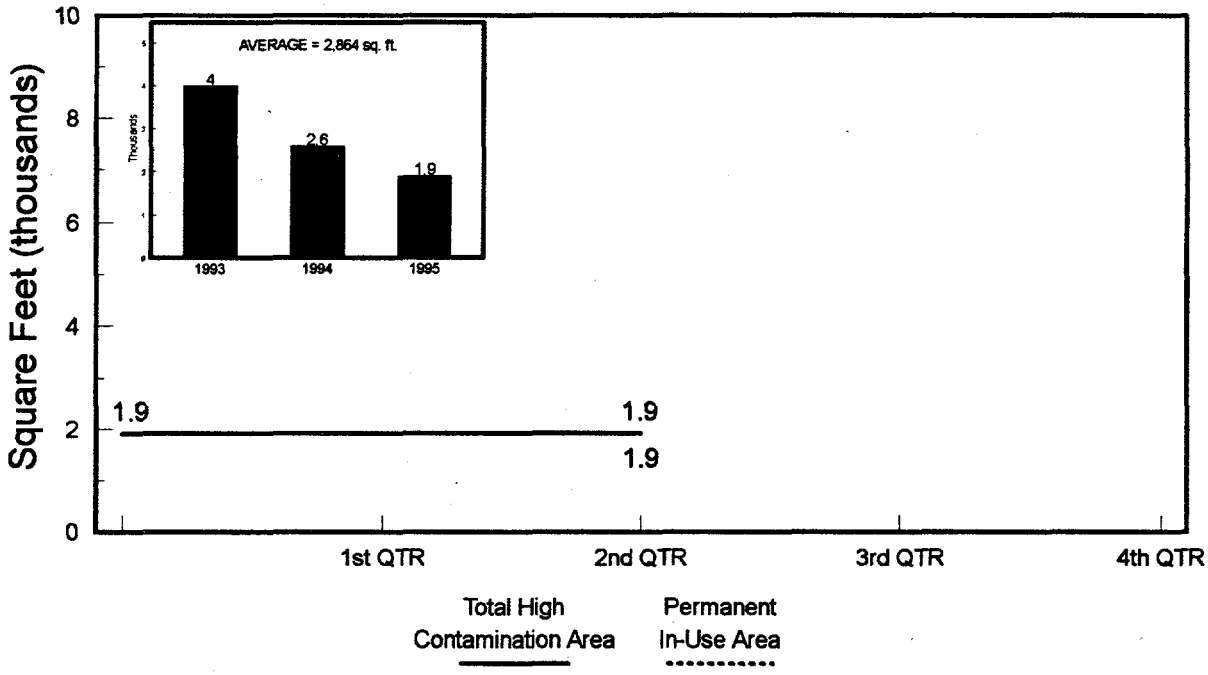
TRA Contamination Area
CY-96



This indicator is used to report the total area designated as Contamination Area as defined in Table 2-3 of the INEL RCM.

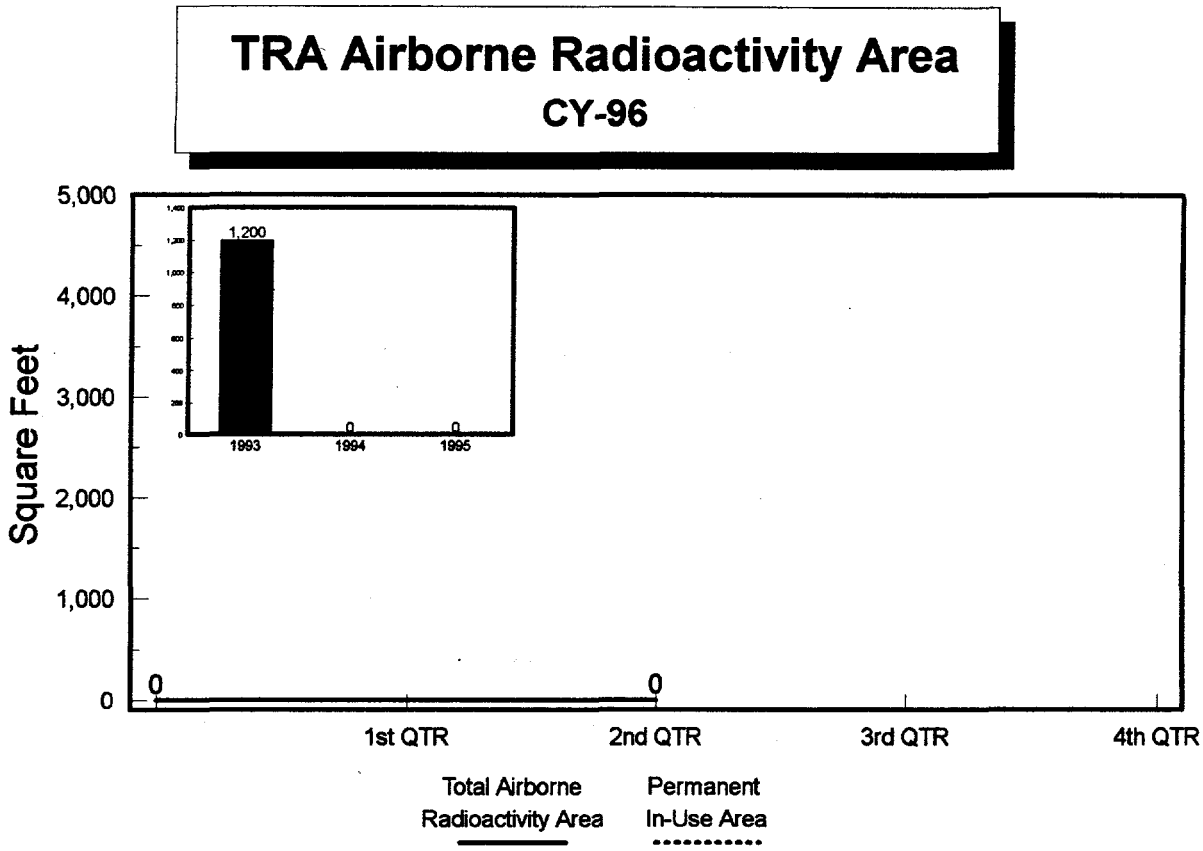
The total Contamination Area at TRA at the end of the second quarter was 52,516 square feet. Of this area, 25,619 square feet was designated as permanent and in-use.

TRA High Contamination Area
CY-96



This indicator is used to report the total area designated as High Contamination Area as defined in Table 2-3 of the INEL RCM.

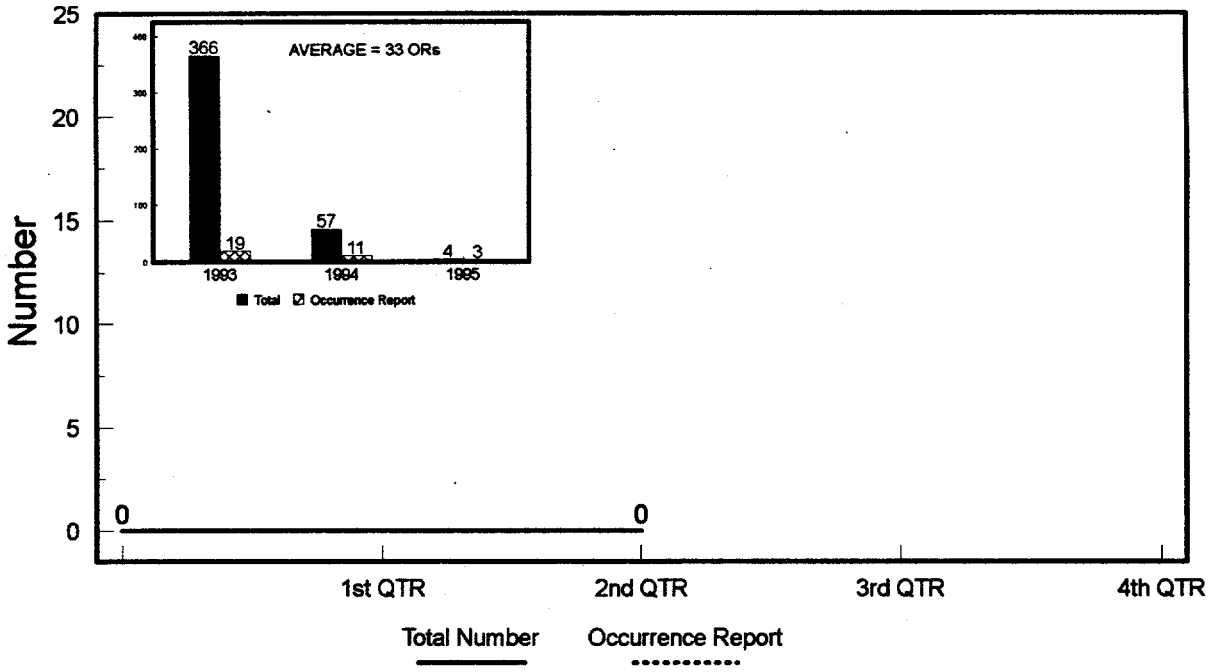
The total High Contamination Area at TRA at the end of the second quarter was 1,991 square feet. All of this area was designated as permanent and in-use.



This indicator is used to report the total area designated as Airborne Radioactivity Area as defined in Table 2-3 of the INEL RCM.

The total Airborne Radioactivity Area at TRA at the end of the second quarter was zero square feet.

TRA Year-to-Date Spills
CY-96

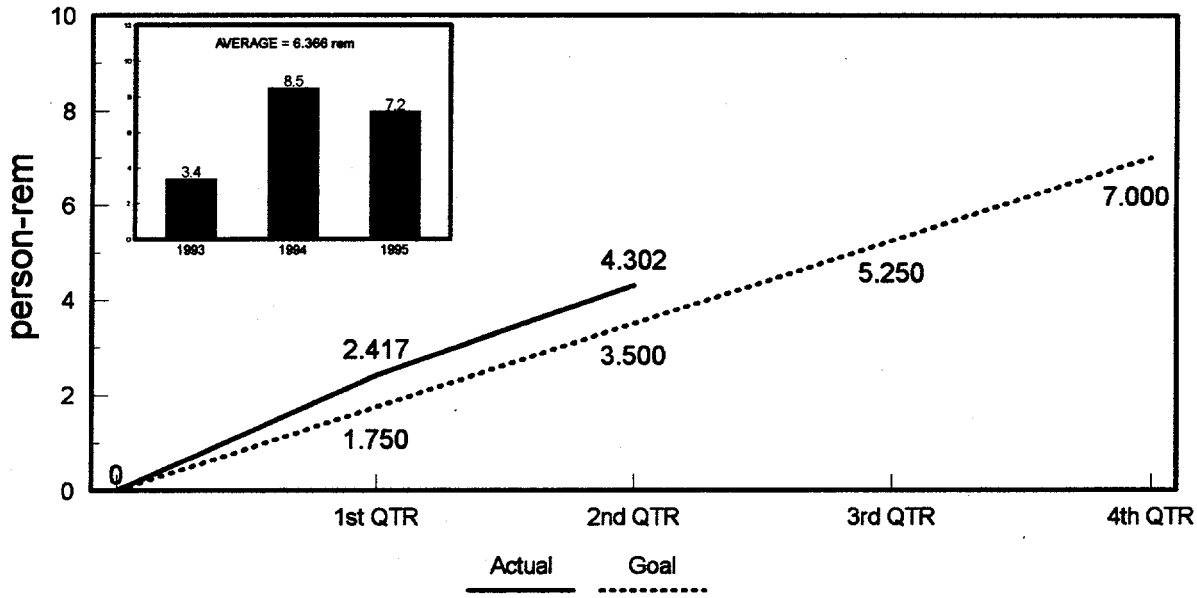


This indicator is used to report inadvertent loss or release of radioactive material.

There were no spills or loss of control of radioactive material during the second quarter at TRA.

Test Area North/
Specific Manufacturing Capability

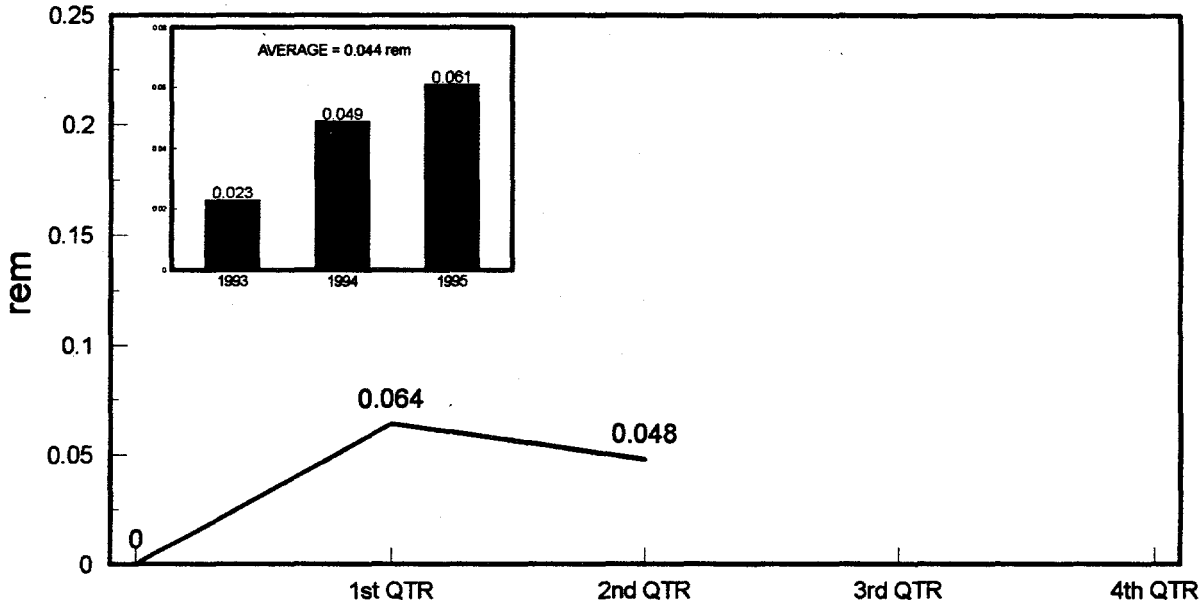
TAN/SMC Collective Year-to-Date Penetrating Radiation Dose
CY-96



TAN and SMC collective occupational radiation exposure through the end of the second quarter was 4.302 person-rem.

Major contributors to the penetrating radiation at TAN and SMC were from storage of DRCT containers, handling and shipment preparation of DRCT fuel assembly containers and routine radiological work activities.

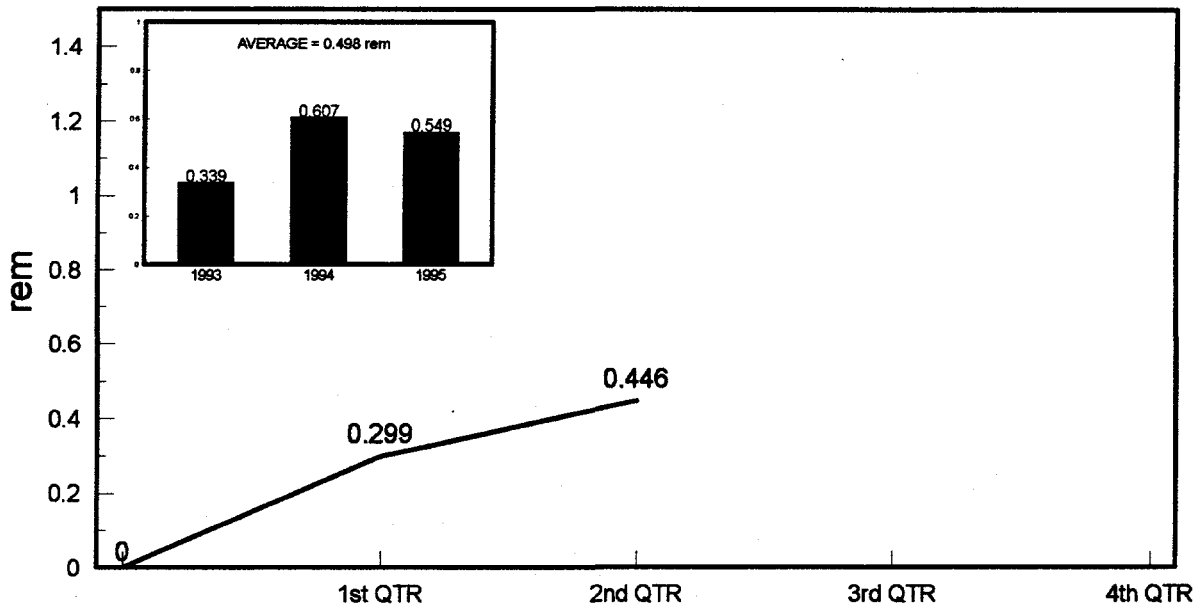
TAN/SMC Year-to-Date Average Worker Dose
CY-96



The average worker radiation exposure provides an indication of the effectiveness of the Radiological Control and ALARA Programs.

The average TAN/SMC occupational radiation exposure through the end of the second quarter was 0.048 rem.

TAN/SMC Maximum Year-to-Date Penetrating Dose to a Worker
CY-96

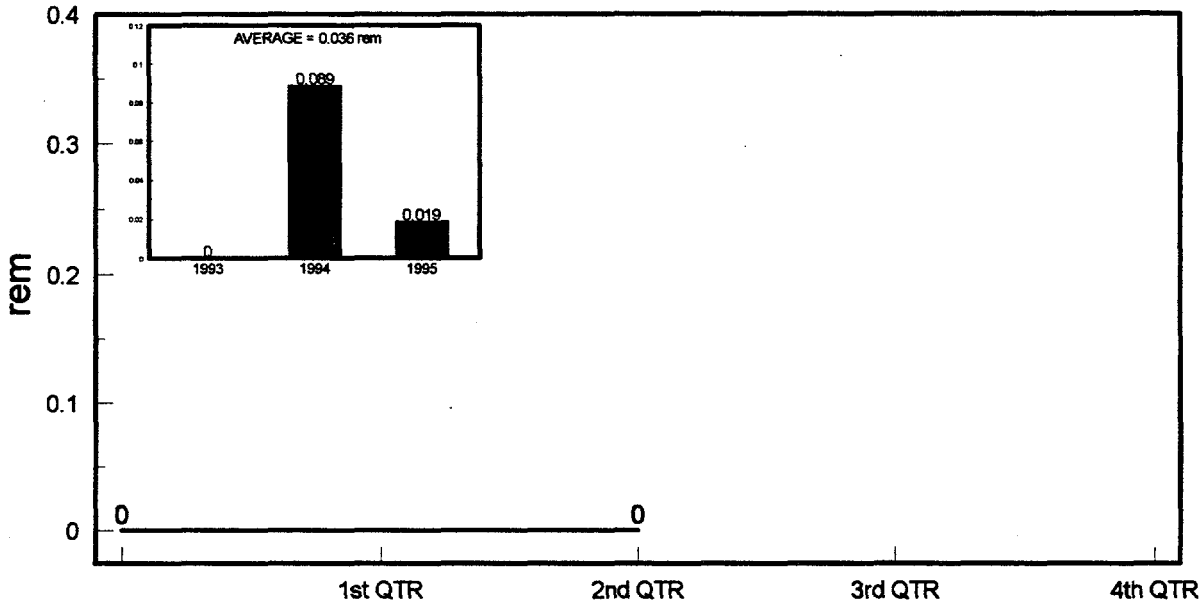


The maximum penetrating radiation dose to a worker provides another indication of how well worker radiation exposure is being managed.

The maximum penetrating radiation dose to a TAN/SMC worker through the end of the second quarter was 0.446 rem.

TAN/SMC Maximum Year-to-Date Neutron Dose to a Worker

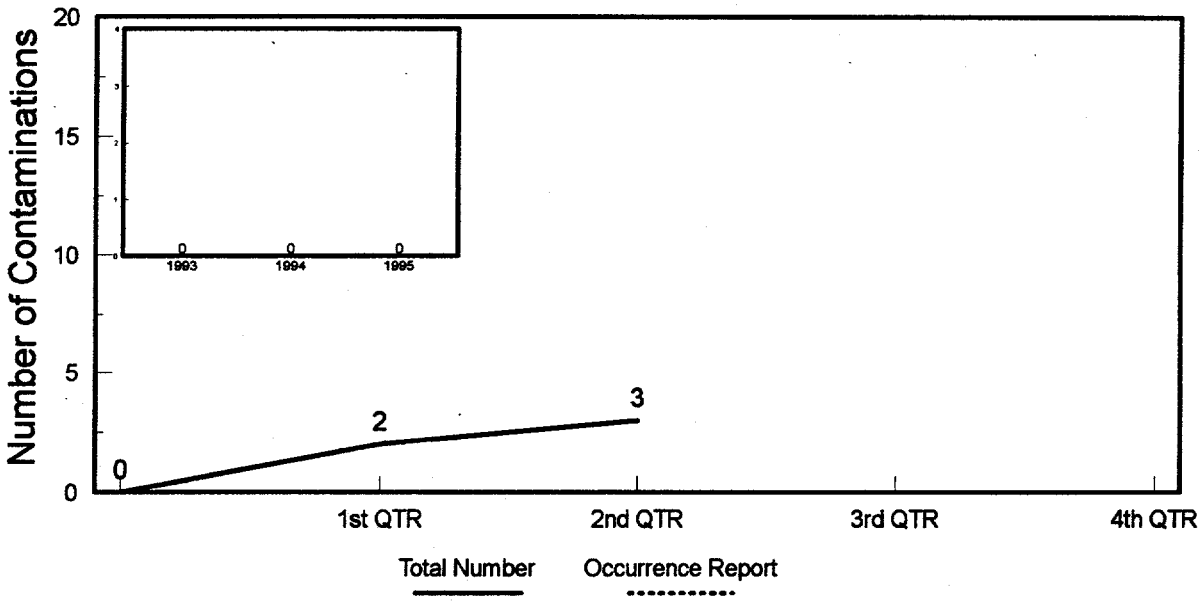
CY-96



The maximum neutron radiation dose to a worker provides an indication of how well occupational exposure to neutron radiation is managed.

The TAN/SMC maximum neutron radiation dose to a worker through the end of the second quarter was zero rem.

TAN/SMC Year-to-Date Skin Contaminations
CY-96



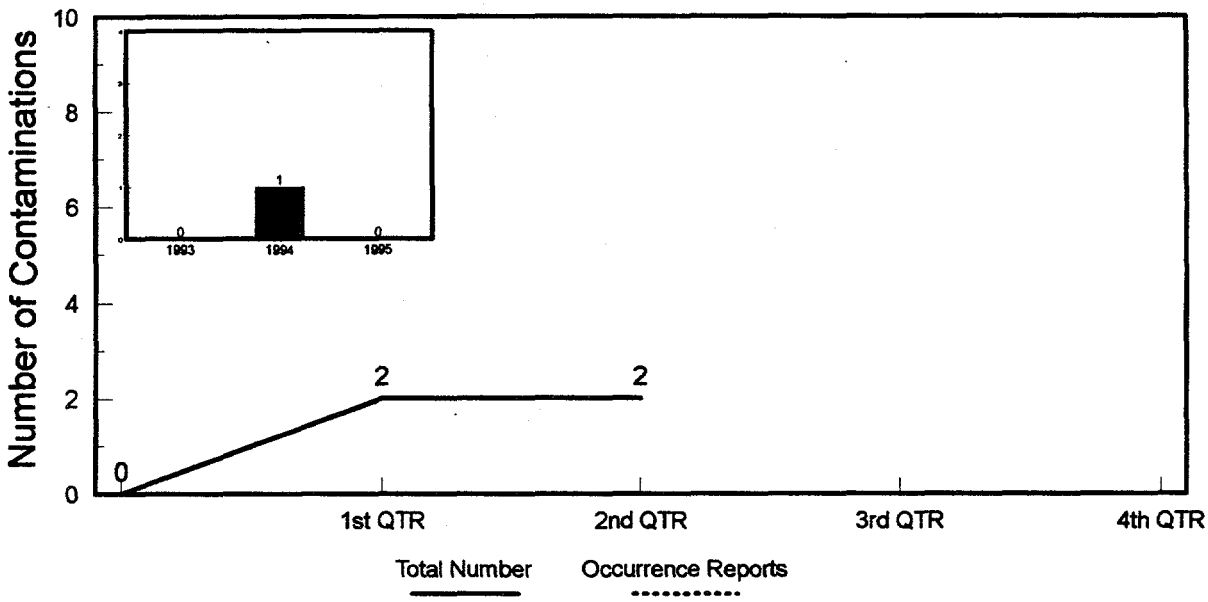
Skin contamination events are a measure of the effectiveness of the radiological protection program, specifically, how well radioactive contamination is controlled.

There was one skin contamination at TAN/SMC through the second quarter which resulted in and OR. Detailed information is contained in OR ID--LIT-TANO-1996-0001.

No facial contaminations or contaminated wounds occurred during the quarter.

TAN/SMC Year-to-Date Clothing Contaminations

CY-96

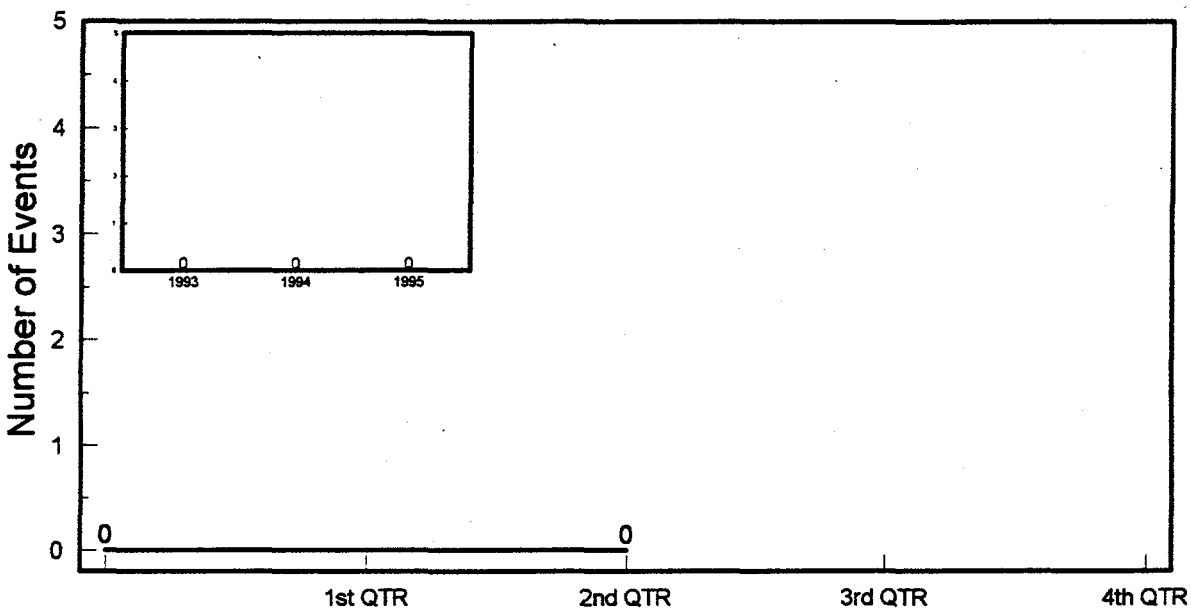


Clothing contamination events are a measure of the overall effectiveness of the radiolgical protection program, specifically, how well radioactive contamination is controlled and how well workers adhere to safe radiological work practices.

There were no clothing contaminations at TAN/SMC during the second quarter.

TAN/SMC Year-to-Date Airborne Radioactivity Events

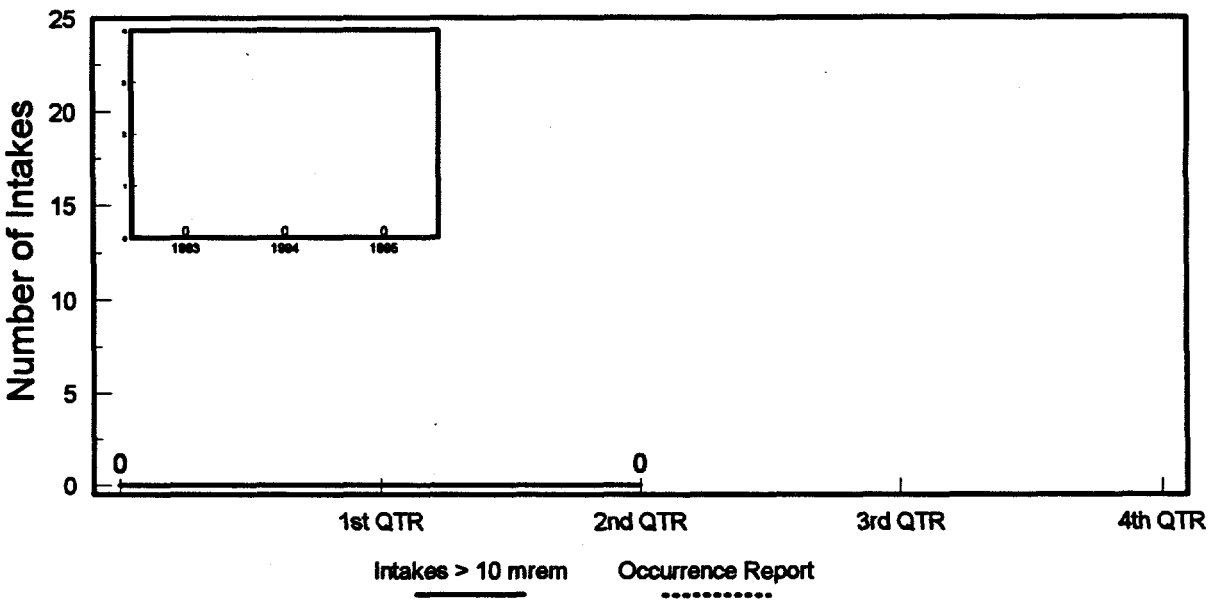
CY-96



Air samplers monitor occupied process and laboratory areas to quantify concentrations of airborne radioactivity. The DOE unit of measure is a DAC. An area which exceeds 10% of one DAC must be posted as an Airborne Radioactivity Area.

No airborne activity greater than 10% DAC was detected at TAN/SMC areas not posted as Airborne Radioactivity Areas during the second quarter.

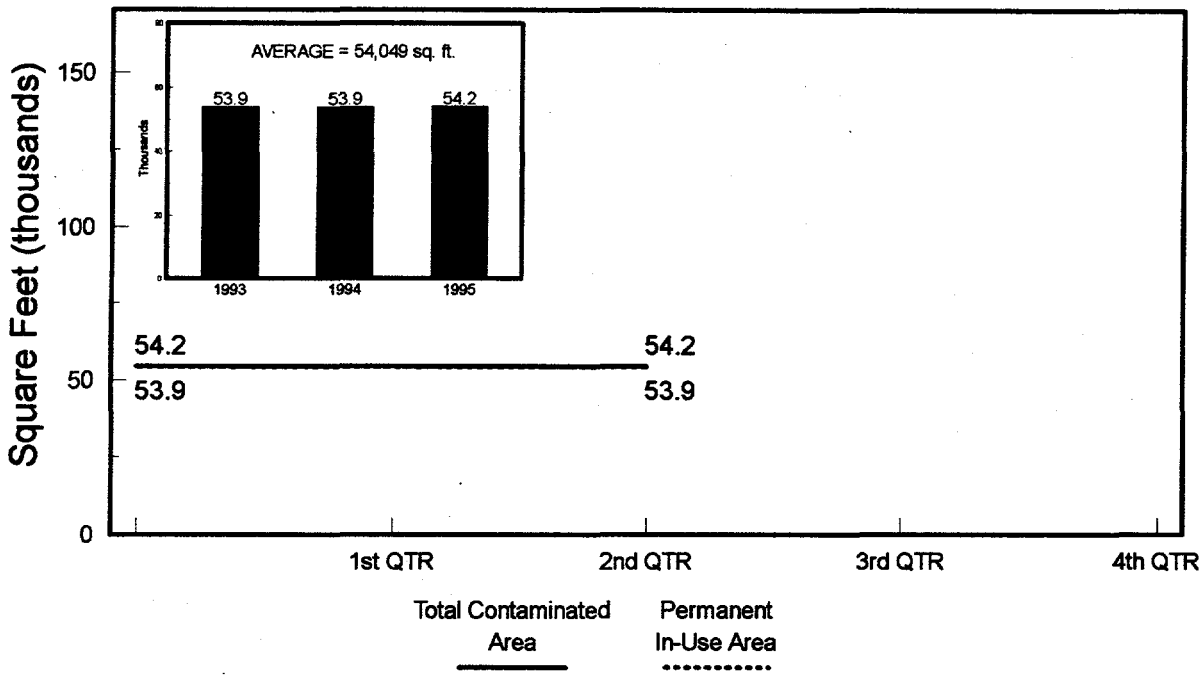
TRA Year-to-Date Radioactive Material Intakes
CY-96



This indicator depicts the number of positive bioassay results that indicate an intake of radioactive material and result in a dose assessment of 10 mrem or greater from TRA exposure during occupational work activities.

There were no positive bioassays indicating an intake of radioactive material that resulted in a dose assessment of 10 mrem or greater at TRA during the second quarter.

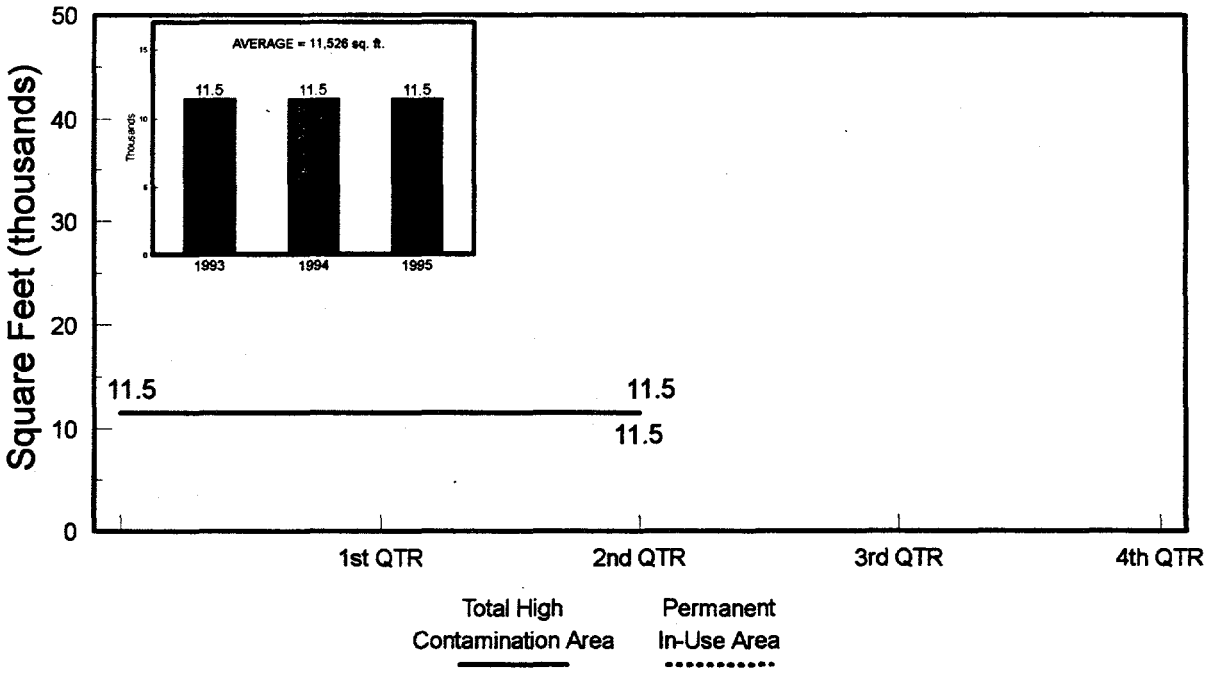
TAN/SMC Contamination Area
CY-96



This indicator is used to report the total area designated as Contamination Area as defined in Table 2-3 of the INEL RCM.

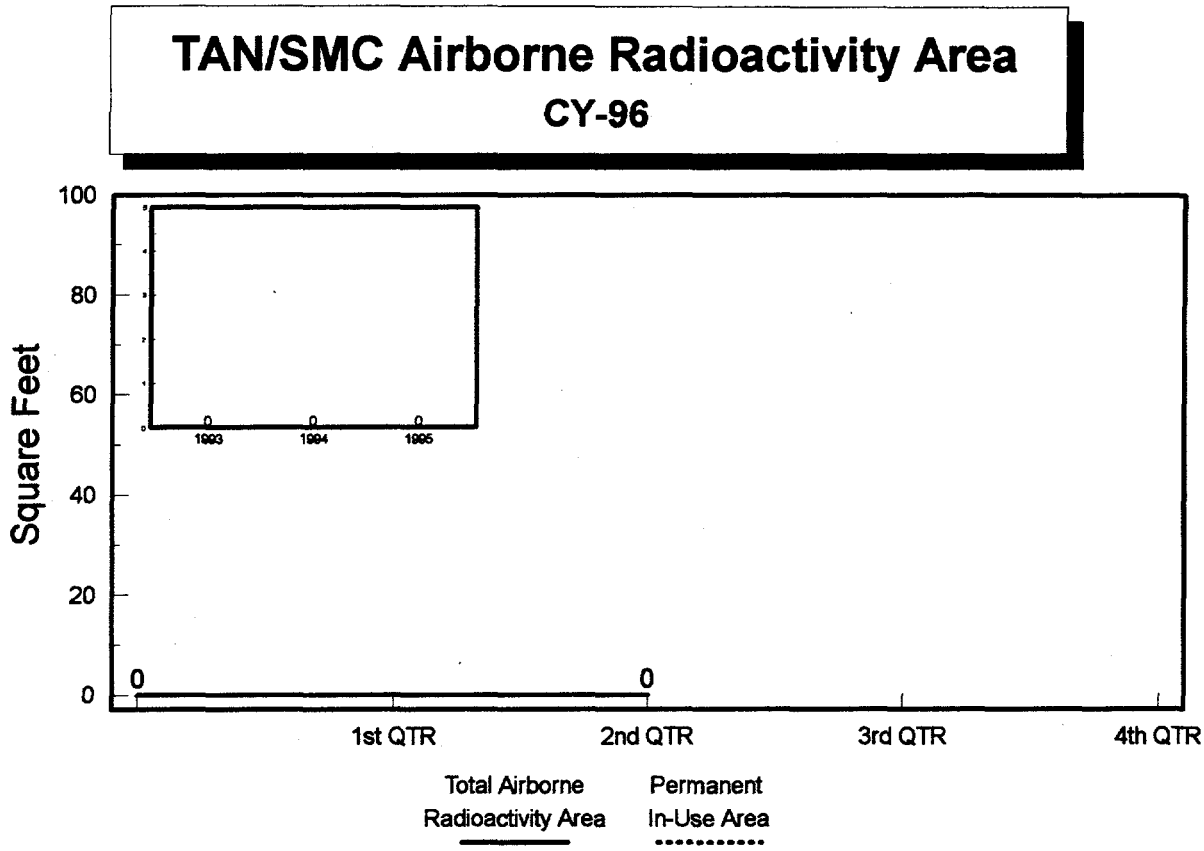
The total Contamination Area at TAN/SMC at the end of the second quarter was 54,249 square feet. Of this area, 53,949 square feet was designated as permanent and in-use.

TAN/SMC High Contamination Area
CY-96



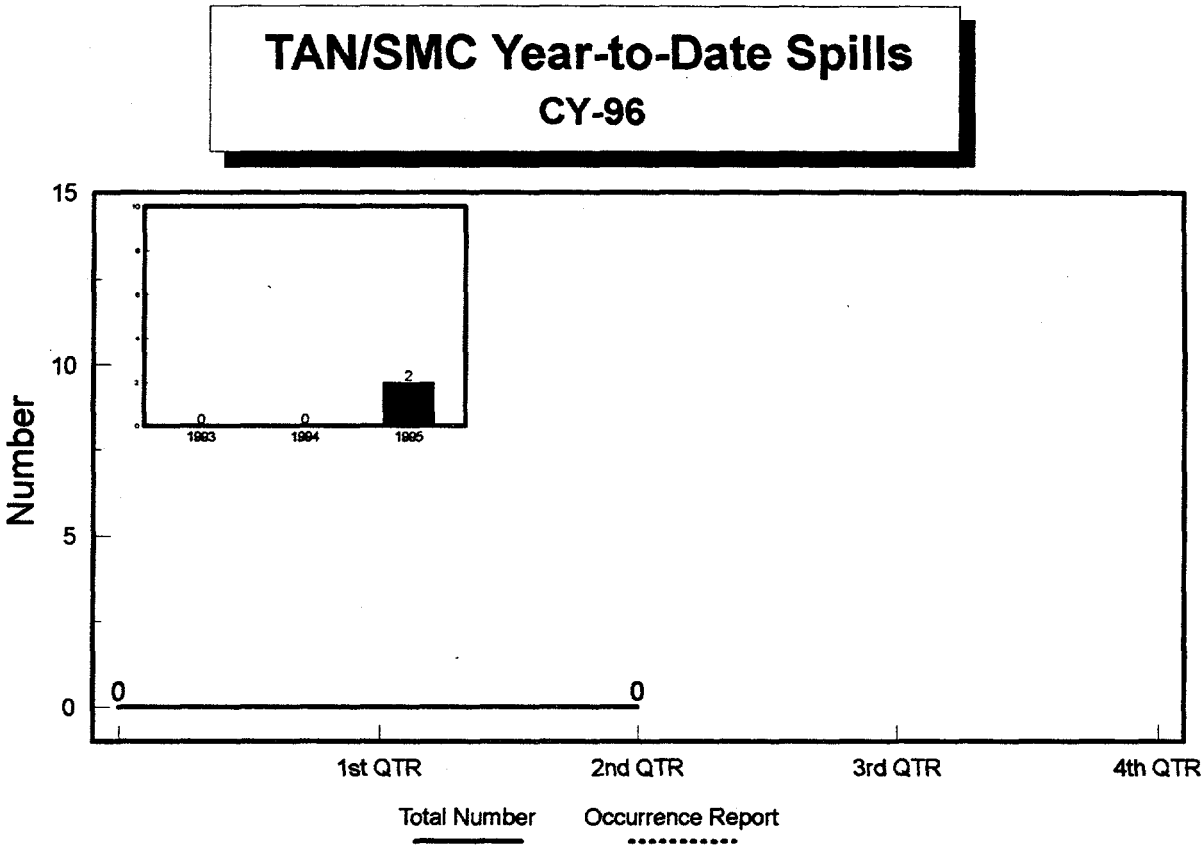
This indicator is used to report the total area designated as High Contamination Area as defined in Table 2-3 of the INEL RCM.

The total High Contamination Area at TAN/SMC at the end of the second quarter was 11,526 square feet. All of this area was designated as permanent and in-use.



This indicator is used to report the total area designated as Airborne Radioactivity Area as defined in Table 2-3 of the INEL RCM.

The total Airborne Radioactivity Area at the INEL at the end of the second quarter was zero square feet.



This indicator is used to report inadvertent loss or release of radioactive material.

There were no spills or loss of control of radioactive material at TAN/SMC during the second quarter.