

**GPU Nuclear**  
P.O. Box 388  
Forked River, New Jersey 08731  
609-693-6000  
Writer's Direct Dial Number:

August 20, 1982

Mr. Richard W. Starostecki, Director  
Division of Project and Resident Programs  
U.S. Nuclear Regulatory Commission  
Region I  
631 Park Avenue  
King of Prussia, PA 19406

Dear Mr. Starostecki:

Subject: Oyster Creek Nuclear Generating Station  
Docket No. 50-219  
Inspection Report No. 82-17

This letter is submitted in response to your letter of July 22, 1982, regarding the findings of the June 2 - July 5, 1982, routine inspection by Mr. J. Thomas of your staff.

In accordance with 10 CFR 2.201, enclosed is our response to the Notice of Violation. If there are any questions regarding the supplied information, please contact me or Mr. Michael Laggart of my staff at (609) 971-4643.

Very truly yours,

Peter B. Fiedler  
Vice President and Director  
Oyster Creek

PBF:MWL:lse  
Enclosure

cc: Mr. Ronald C. Haynes, Administrator  
Region I  
U.S. Nuclear Regulatory Commission  
631 Park Avenue  
King of Prussia, PA 19406

NRC Resident Inspector  
Oyster Creek Nuclear Generating Station  
Forked River, NJ 08731

8209200256 820910  
PDR ADOCK 05000219  
Q PDR

VIOLATION:

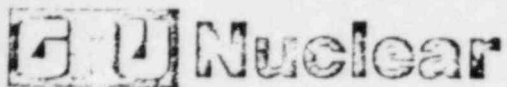
Technical Specification 3.6.B.(2), requires that radioactive liquid effluents being released to the discharge canal be continuously monitored.

Contrary to the above, from June 12, 1982 to June 14, 1982, about 300 gallons of water with a total activity of 70.5 millicuries was released to the discharge canal via the storm sewer system and was not continuously monitored.

RESPONSE:

The violation is correct as stated above. As identified in the inspection report, the drain path utilized on June 12, 13, and 14, 1982, was thought to lead to a radwaste collection sump. Upon discovery by an employee that the drain path actually led to the environment via storm catch basins, the utilization of the drain path was discontinued. Full compliance was achieved at this time.

With regard to future corrective actions, two previous submittals have been made to the NRC regarding the subject violation. On July 14, 1982, Reportable Occurrence No. 50-219/82-16/03L was submitted; and on July 20, 1982, a letter was submitted detailing future corrective actions. Both submittals are being included as attachments to this response. The corrective actions detailed, adequately address the concerns of the violation.



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Forked River, New Jersey 08731  
609-693-6000  
Writer's Direct Dial Number.

July 20, 1982

Mr. Ronald C. Haynes, Administrator  
Region I  
U.S. Nuclear Regulatory Commission  
631 Park Avenue  
King of Prussia, PA 19406

Dear Sir:

Subject: Oyster Creek Nuclear Generating Station  
Docket No. 50-219  
Contamination Control

On June 11, 1982, the New Radwaste service air system at Oyster Creek was contaminated with radioactive water from a resin transfer tank. The contamination resulted from a failure of a check valve to isolate at a cross-connection of the two systems. While draining the contaminated water from the service air system, an inadvertent release to the environment occurred. The drain path utilized was thought to lead to a radwaste collection sump; however, it was discovered that it actually led to the environment via storm catch basins.

Attached to this letter is a copy of Reportable Occurrence No. 82-16, submitted on July 14, 1982. The LER describes the above events in more detail; however, we feel the format of the report does not convey how serious GPU Nuclear regards this matter. This letter is being submitted to inform the NRC as to how management intends to allocate its resources in matters of this nature.

Although the radioactivity released during this event did not endanger the public health and safety, we realize that a potential for future releases may exist due to intersystem cross-connects. In addition to the corrective actions listed in the attached Reportable Occurrence, we plan to undertake the following in order to prevent recurrence:

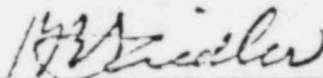
1. Perform a documented review of all plant floor and roof drain systems including, where feasible, a field verification of drawings to identify the discharge points. Conspicuously mark all such drains to clearly differentiate those that discharge to normally contaminated systems from those that discharge to the environment or clean collection systems.

July 20, 1982

2. For floor drains or hub drains inside the radiation controlled area or other potentially contaminated areas that are found to discharge to the environment or clean collection systems, provide suitable plugs or shutoff devices, where feasible, that will be procedurally controlled to preclude inadvertent discharge of contaminated material.
3. Identify all cross-connect paths to clean systems that may result from normal operation, valving errors, valve leakage, or check valve leakage. Ensure that appropriate procedural controls exist on the intentional use of these cross-connects to assure that cross contamination does not occur.
4. For all system or component draining evolutions using temporary pipe or hose connections, establish procedural controls to verify the discharge point of the drain path before commencing the evolution.
5. For systems or component drain paths determined to discharge to the environment or clean systems, evaluate, on an individual basis, the feasibility and desirability of redirecting the drain path to a contaminated collection system.

The above actions are scheduled for completion prior to 2/1/83. If there are any questions, please feel free to call me or Mr. Michael Laggart of my staff at (609) 971-4643.

Very truly yours,



Peter B. Fiedler  
Vice President and Director  
Oyster Creek

PBF:MWL:lse

cc: NRC Resident Inspector  
Oyster Creek Nuclear Generating Station  
Forked River, NJ 08731



GPU Nuclear  
P O Box 388  
Forked River, New Jersey 08731  
609-693-6000  
Writer's Direct Dial Number

July 14, 1982

Mr. Ronald C. Haynes, Administrator  
Region I  
U.S. Nuclear Regulatory Commission  
631 Park Avenue  
King of Prussia, PA 19406

Dear Mr. Haynes:

Subject: Oyster Creek Nuclear Generating Station  
Docket No. 50-219  
Licensee Event Report  
Reportable Occurrence No. 50-219/82-16/03L

This letter forwards three copies of a Licensee Event Report to report Reportable Occurrence No. 50-219/82-16/03L in compliance with paragraph 6.9.2.b.4 of the Technical Specifications.

Very truly yours,

Peter B. Fiedler  
Vice President and Director  
Oyster Creek

PBF:lse  
Enclosures

cc: Director (40 copies)  
Office of Inspection and Enforcement  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Director (3)  
Office of Management Information and  
Program Control  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

NRC Resident Inspector  
Oyster Creek Nuclear Generating Station  
Forked River, NJ 08731

~~8208050453~~

OYSTER CREEK NUCLEAR GENERATING STATION  
Forked River, New Jersey 08731

Licensee Event Report  
Reportable Occurrence No. 50-219/82-16/03L

Report Date

July 14, 1982

Occurrence Date

June 11, 1982

Identification of Occurrence

An unmonitored release of radioactive water occurred due to contamination of service air piping in the New Radwaste Building. In one instance the leakage was to the discharge canal via the drainage system, and in two other instances, the leakage was to the soil.

This event is considered to be a reportable occurrence as defined in the Technical Specifications, paragraph 6.9.2.b.4.

Conditions Prior to Occurrence

The plant was at steady state operation.

Power Levels:	Reactor	1621 MWt
	Generator	540 MWe
	Mode Switch	Run

Description of Occurrence

On Friday, June 11, 1982 at approximately 2000 hours, New Radwaste Operations personnel were preparing to transfer spent resins from the storage tank into a shipping cask. Prior to the actual resin transfer operation, the tank was filled with condensate water to create a slurry and was then mixed using air at approximately 30 psig. With the air still mixing the tank contents, condensate water was used to backflush the resin transfer line into the tank. It was during this backflush that the vent line became plugged, (attributed to a blinded resin screen on the vent) which resulted in pressurizing the tank from the condensate transfer system. Water was forced back into the air line, through the pressure regulator and the in-line check valve (condensate water pressure at the tank is greater than air system pressure).

The first evidence of a problem was when the backflush line pressure did not decrease as expected. Further indications received later were an area high radiation alarm near the air receiver tank, and the discovery of radioactive fluid leaking from a moisture trap in the air line. The resin tank was isolated and all necessary safety and radiological concerns were promptly addressed. During the investigation into the extent of the problem, a leaking hose connection in an air line outside of the New Radwaste Building was discovered. Total leakage to the soil was estimated at approximately 10 ml, with a gross radioactivity of 0.62 microcuries.

The air system geometry is such that most of the contaminated water remained in the bottom of the air receiver tank (thus preventing the accumulation in the air compressor and after cooler from becoming contaminated). The air receiver is automatically blown down through a drain line which has a filter and a trap in the line. The available data suggests this feature was inoperable at the time of this event. During the primary decontamination of the air receiver, it was flushed with water several times via an alternate route utilizing a bypass around the filter/trap assembly.

It was realized on June 21, 1982, that the drain line from the air receiver leads to the storm drain which discharges directly to the discharge canal. It was estimated that a total of approximately 300 gallons was discharged, with gross radioactivity of  $6.21 \text{ E-2}$  microcuries/ml. This correlates to a total of 0.0705 curies. Upon discovery of this event, the affected catch basins, storm drains, and the air receiver drain line were isolated.

During the secondary decontamination of the air receiver using a hydrolazer, water (less than 5 gallons) leaked to the soil outside the building. Approximately 30 ft<sup>3</sup> of soil (3 ft. x 10 ft. x 1 ft. deep) was collected and sampled; based on the sample results, all of the soil was returned to the original area.

#### Apparent Cause of Occurrence

The cause of the event was attributed to a blocked vent line from the spent resin tank. Since the resin-water mixture level in the tank was above the level of the screen on the vent line, the air pressure in the tank apparently trapped enough resins against the screen to prevent the venting of the tank. The vent valve in the line was checked after the event, and both the remote valve indication and valve operation checked out satisfactorily.

In addition, the check valve in the air system did not provide effective isolation of the spent resin tank from the Service Air System.

#### Analysis of Occurrence

The first of the three interrelated events was the leak from the hose connection. All surveys taken of the soil from this leak (estimated at 10 ml) showed no appreciable readings above background levels.

The second of these events was the leakage from the building to the soil. Several soil samples were examined before returning the soil back to its location. The maximum concentrations of the two detectable isotopes, Mn 54 and Co 60, were  $7.09 \text{ E-5}$  and  $3.71 \text{ E-4}$  microcuries/gm, respectively. Both of these values are within the limits set forth in 10 CFR 20 and 10 CFR 30 (10 CFR 30 is used to determine concentrations in the soil based on 1 gram.) Total volume leakage was estimated at approximately five (5) gallons.

The third of these events is the drainage to the discharge canal. Total volume leakage was estimated at 300 gallons. The isotopic analysis showed the following maximum concentrations:

Mn 54  $9.46 \text{ E-3}$  microcuries/ml  
Co 60  $5.26 \text{ E-2}$  microcuries/ml

Although these releases occurred during 3 separate flushes of the air receiver, the following analysis assumes that all 300 gallons were released in 15 minutes. It also assumes a minimum dilution flow of 460,000 gpm, even though actual dilution flow was higher. Based on this, the concentrations of each isotope in the discharge are as follows, with their associated 10 CFR 20 limit:

Mn 54  $4.11 \times 10^{-7}$  microcuries/ml, limit  $1.0 \text{ E-4}$  microcuries/ml  
Co 60  $2.29 \times 10^{-6}$  microcuries/ml, limit  $5.0 \text{ E-5}$  microcuries/ml

#### Corrective Action

The immediate corrective actions were to first isolate the affected spent resin tank and then prevent as much of the air system as possible from becoming contaminated. The air compressor was kept in operation, in order to prevent the syphoning of water into unaffected piping. A direct frisk was made of the ground under the total length of hose outside the building, and all readings were at or below background levels. Approximately  $30 \text{ ft}^3$  of soil outside the building, affected by the leak during flushing, was collected, sampled, and then returned once sample results were analyzed and it was determined that no 10 CFR 20 or 10 CFR 30 limits were exceeded.

The check valve in the air line to the spent resin tank was examined and no failures were detected. The affected storm drains and catch basins in the drainage system were decontaminated and the radiation levels in the air receiver have been reduced to background levels.

In addition to these efforts, the procedure for the transfer of spent resins has been reviewed, and has been changed to reflect two (2) important concepts: 1) the air mixing operation will be halted prior to starting the backflushing operation, so that air and condensate water are not being forced into the tank at the same time; 2) prior to transferring resins from the tank, the level in the tank will be lowered to insure that the resin slurry is below the screen on the vent line (i.e., prevent inadvertent vent line blockage).

An evaluation will be conducted to determine what constitutes acceptable isolation of noncontaminated systems from contaminated systems. Based on the results of this determination, modification of existing systems will be considered to prevent future incidents of contamination entering "clean" systems through designed interconnections.

Additionally, procedural controls will be established to assure that in all nonroutine draining evolutions, the discharge point of the drain path will be verified prior to commencing the evolution. As an aid to implementing this requirement, a system of unique definition of noncontaminated drains will be evaluated.

LICENSEE EVENT REPORT

CONTROL BLOCK: 1 (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

01 N J O C P 11 2 0 0 - 0 0 0 0 0 0 - 0 0 0 3 4 1 1 1 1 1 1 4 1 5  
 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

CON'T  
 01 REPORT SOURCE 6 0 5 0 0 0 0 2 1 1 9 7 0 6 1 1 1 8 2 8 0 7 1 1 4 8 2 9  
 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)  
 012 During a spent resin transfer operation in NRW, the service air  
 013 piping became cross-contaminated with water. From this, 3 leaks to the  
 014 environment occurred: 1) from a hose connection to the soil, 2) from  
 015 the building to the surrounding soil, 3) through a drainage line to  
 016 the discharge canal. In all cases, no 10 CFR 20 limits were exceeded.  
 017  
 018  
 019

SYSTEM CODE CAUSE CODE CAUSE SUBCODE COMPONENT CODE COMP SUBCODE VALVE SUBCODE  
 019 P A 11 X 12 Z 13 F I L T E R 14 7 15 7 16  
 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

LEAD REPORT NUMBER EVENT YEAR  
 017 8 2 21 22  
 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

ACTION FUTURE ACTION EFFECT ON PLANT SHUTDOWN METHOD HOURS ATTACHMENT SUBMITTED NRC-4 FORM SUB PRIME COMP. SUPPLIER COMPONENT MANUFACTURER  
 018 Y 18 G 19 2 20 7 21 0 0 0 0 0 0 22 Y 23 Y 24 A 25 X 26 0 0 0 0 0 0 27  
 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)  
 019 The cause was attributed to a blocked vent line on the tank. The screen  
 020 apparently became clogged during the backflushing of the resin transfer  
 021 line. The systems affected were isolated, and all necessary protective  
 022 and radiological measures were taken. A thorough review of drains and  
 023 system cross-connects will be conducted to determine future actions.  
 024  
 025  
 026  
 027

FACILITY STATUS % POWER OTHER STATUS METHOD OF DISCOVERY DISCOVERY DESCRIPTION  
 028 E 28 0 29 8 4 29 NA 30 A 31 Operator Discovery 32  
 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

ACTIVITY CONTENT RELEASED OF RELEASE AMOUNT OF ACTIVITY LOCATION OF RELEASE  
 029 J 32 M 34 0.07 curies total 35 Discharge Canal (1); Soil (2) 36  
 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

PERSONNEL EXPOSURES NUMBER TYPE DESCRIPTION  
 030 0 0 0 0 37 Z 38 NA 39  
 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

PERSONNEL INJURIES NUMBER DESCRIPTION  
 031 0 0 0 0 40 NA 41  
 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

LOSS OF OR DAMAGE TO FACILITY TYPE DESCRIPTION  
 032 Z 47 NA 48  
 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

PUBLICITY ISSUED DESCRIPTION  
 033 Y 44 Press Releases (2) 45  
 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

NAME OF PREPARER Michael J. Fitzgerald PHONE (609) 971-4896

8208050460