**DEFENSE-IN-DEPTH EVALUATION
FOR THE
NEW WASTE TRANSFER FACILITY (U)**

January 1995

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Date: 2-28-95

Westinghouse Savannah River Company
Engineering and Construction Services Division
Aiken, SC 29808

SAVANNAH RIVER SITE

PREPARED FOR THE U.S. DEPARTMENT OF ENERGY UNDER CONTRACT NO. DE-AC09-89SR18035

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FOR THE
NEW WASTE TRANSFER FACILITY (U)**

T. G. HAYES

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January 1995

**Westinghouse Savannah River Company
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Aiken, SC 29808**

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1.0 ABSTRACT

This report fulfills part of the requirements of References 2 and 3 by documenting a Defense-In-Depth evaluation for the New Waste Transfer Facility (NWTF). This evaluation was performed using methodology similar to that used in an evaluation for the Defense Waste Processing Facility (DWPF). It differs because the DWPF evaluation was based on an existing Process Hazards Analysis (PHA) while NWTF's is based on a Preoperational Process Hazards Review (PPHR) (Ref. 1).

The accidents in the Process Hazards Review (PHR) were reviewed to determine those that might have significant consequences. Significance was based on the findings of the PHR. The facility design was reviewed to determine the Structures, Systems, and Components (SSCs) and administrative controls available before and after each accident. From this was developed a list of the Lines of Defense (LODs) available to contain the hazard associated with the accident. A summary of these LODs is given in Appendix C. Items are tabulated that are suggested for consideration in the functional classification as worker protection items. The specific criteria used in the evaluation is given in the methodology section of this report. The results are documented in Appendices A, B, C, and D.

2.0 INTRODUCTION

NWTF was constructed as a modification to the existing Tank Farm complex. To evaluate the acceptability of its operation, a USQ is being written against the Tank Farm Authorization Basis. To support the determinations in the USQ, a Safety Evaluation Report (SER) is being prepared to document accident analysis specific to NWTF. At a later date a revised SAR for the Tank Farm will be generated that meets the requirements of DOE Order 5480.23 (Ref. 2) and DOE Standard 3009-94 (Ref. 3). These documents introduce the concept of evaluating and describing the Defense-In-Depth that the design of a facility provides. This evaluation has been performed to bridge the gap between the Tank Farm SAR and the ".23" style SAR in the area of Defense-In-Depth.

Another concept that receives increased attention in 5480.23 is worker protection. The output of this report will be used in conjunction with the SER to determine if any SSCs need to be functionally classified to meet this intent. Appendix D of this report lists SSCs and Administrative controls that may fit into this category. These are suggestions only. The determination of Functional Classifications will be documented in a separate report.

The output of this report will also be an aid in writing the OSRs for the facility by documenting facility response to events and some of the reasoning behind selection of worker safety items.

3.0 FACILITY DESCRIPTION

This facility includes one diversion box (HDB8) and four pump pits (HPP7 through HPP10) which provide for the transfer of liquid radioactive waste in the 200H Area, and serve as the transfer point for recycle waste transfers from the DWPF. The diversion boxes and pump pits are contained in a building consisting of a high bay and low bay area. The high bay area contains pump pits, the diversion box and a truck bay. The low bay area contains the local instrumentation, Field Operations Station (FOS), Crane Control Room, Electrical Control Room, Battery Room, Storage Room for protective clothing and supplies, the Vacuum Blower System and the Mezzanine. Waste transfer lines to and from HDB8 tie into HDB5, HDB6, HDB7, Low Point Pump Pit, Late Wash Facility and ETF. The interarea transfer lines to and from F Area tie in to HPP7.

The diversion box is below grade with four feet of shield wall extending above the high bay floor. It has thirty-four process nozzles (18 wall nozzles and 16 floor nozzles) that are designed to provide specific transfers between the diversion box and HDB5, HDB6, HDB7, DWPF and ETF. The 16 floor nozzles are hard piped and are routed through a pipe encasement from the diversion box to the four pump tank pits. Remote pipe jumpers using Hanford connectors are provided in the diversion box to allow various transfer routes. Interlocking concrete cell covers are provided over the diversion box for shielding purposes.

The four pump tanks are housed separately in adjacent pits (Ref. 4). The pump pits are below grade and stainless steel lined with four feet of shield wall extending above the high bay floor. All pump tanks are vertical cylindrical tanks, 12 ft in diameter and 8-1/2 ft high. Each pump tank has two flanged ports for transfer pumps, and a flanged port for an agitator. Each pump tank has instrumentation for measuring the liquid level (dual) and temperature. Each pump tank has a transfer pump and an agitator. The interarea pump tank (HPT7) has an additional pump for transfers from H to F or within H Area. Each tank (except HPT7) is provided with a steam transfer jet eductor that can transfer the contents of the tank to an adjacent tank. Steam transfer jets are installed in the pump pits and diversion box sumps to provide transfer of sump contents into a pump tank. A removable conductivity probe is provided to detect leaks in each sump. Each sump is equipped with a 3-pipe dip tube assembly for level instrumentation. Interlocking concrete cell covers are provided over the pump pits for shielding purposes.

The pump pits and the diversion box cell are equipped with individual underliner systems for draining and detecting leaks in the stainless steel floor liners. A system of drainage slots in the concrete under the liner conducts leaks to an underliner leak detection stainless steel sump outside the cell in the concrete foundation. The underliner leak detection sump has a conductivity probe and pump-out so that liquid leaks can be detected and removed.

Each process transfer line is encased by a jacket for secondary containment. Leak detection systems are located at the low point of the jackets. Any core line leak is contained by the jacket and drained into a Leak Detection Box (LDB) that is equipped with a conductivity probe for leak detection. The LDB contents drain to the HPP7 or HDB8.

A Process Vessel Ventilation system is provided for the pump tanks and cells to purge the pump tanks and prevent the release of radioactive materials into the building enclosure. The PVV is operated continuously with redundant exhaust High Efficiency Particulate Air (HEPA) filters and exhaust fans. The pump tanks normally operate under a slight negative pressure due to the purge by one of two installed exhaust fans. Air enters HDB8 and each pump tank cell after flowing through an inlet prefilter and a HEPA filter. The air circulates into the pump tank through tank overflow line and exits the tank through the vent jumper. The exhaust lines from each of the four tanks are joined in a common header.

The ventilation filtering equipment is adjacent to the high bay building in a concrete-shielded enclosure. The ventilation air from the pump tanks enters a condenser cooled with a chilled water circulating refrigeration system. The air from the condenser enters the mist eliminator, where moisture and particulates are removed. The ventilation air from the mist eliminator is heated by a steam coil heater prior to entering the filter system. The filter system consists of parallel, HEPA filters. Normally, one HEPA filter is online with the other HEPA filter on standby. Filtered air exits from the process vent system, and is exhausted through the stack.

The NWTF high bay enclosure is ventilated with 100% outside air. The ventilation air is exhausted continuously through a HEPA filtration system to the stack. The outside air is drawn through wall intake louvers with backdraft dampers and low efficiency replaceable filters. The exhaust duct system has two branches: one takes air from the enclosure building, and the other takes air from the pits. During normal operation, the damper to the pit is closed, and all exhaust air is taken from the enclosed building. During the maintenance mode, the pit covers are removed, and the branch damper is adjusted to draw about 10,000 cfm from the pits and 4000 cfm from the building. The exhaust air from the pit is heated with an electric heating coil to prevent condensation on HEPA filters. No building heating is provided.

Indicators and related controls are monitored and controlled through the Distributed Control System (DCS). The Operator Console Module (OCM) is located in 241-28H control room.

NWTF is supplied the following services from H Tank Farm:

- Plant Air
- Instrument Air
- Breathing Air
- Electricity
- Steam

4.0 METHODOLOGY

4.1 DEFENSE-IN-DEPTH

DOE Standard 3009-94 (Ref. 3) directs that a qualitative Hazards Analysis be performed at the front end of the safety analysis effort. The output of the Hazards Analysis is a list or matrix of events with corresponding estimates of frequency of occurrence and consequences. The events are binned to determine those requiring further evaluation in the Accident Analysis. Defense-In-Depth (DID) is to be evaluated based on the output of the Hazards Analysis.

NWTF does not yet have a Hazards Analysis that meet the requirements of 3009, however a PPHR does exist. The PPHR was used in this evaluation as input to the Defense-In-Depth Evaluation (DIDE).

The methodology used was as follows:

- Using the latest Preoperational PHR (Ref. 1), a list of hazard events for NWTF was developed. A screening form was used for each event to determine those for which Defense-In-Depth should be evaluated (See Appendix A). The screening forms were developed to streamline the application of the following logic. An event was categorized as "positive" if it met the following criteria;

IF [A & B & (C or D)] are true, THEN the event is "POSITIVE"

- A. The event involves the release of a hazardous material that is not a "Standard Industrial Hazard" as defined by E7 Manual Procedure 2.25 Rev. 2 (See screening form section A)

and

- B. The event is credible (See screening form section B)

and

- C. The event results in the release of material in sufficient quantities to threaten any of the following, (See screening form section C questions 1 - 7)

Offsite individual (> 0.5 REM or > EAL)

Onsite individual including facility worker (>5.0 REM or > ILDH or fatality)

or

- D. The event results in a criticality (See screening form section C question 8)

The consequences determined by the PHR were very conservative in many cases. In the DID effort, all events that the PHR judged to result in consequences that exceeded the acceptance criteria were categorized as positive. This results in events being positive that could be shown acceptable with quantitative evaluation. The purpose of evaluating the Defense-In-Depth of a facility is NOT to cause equipment to be Functionally Classified at some higher level. The purpose of the DID evaluation is to IDENTIFY the features of a facility that contribute to the Defense-In-Depth of the facility. The conservatism in the PHR, which was carried forward into this report, results in a more comprehensive picture of the Defense-In-Depth of NWTF.

- Because of the lack of initiating event frequency in the PHR, all events were classified as credible (See screening form section B).
- For each event that resulted in a positive screen (i.e., met the criteria given above) were identified SSCs that are available to perform as a Mitigative or Preventive Function (MPF) against the hazardous material during normal operation. They are the SSCs and administrative controls relied upon "normally" to contain the hazard and indicate the hazard is contained. The list usually contains a barrier, some indication that the barrier is still functioning and some alarm to indicate when the barrier begins to fail. A thought process used in zeroing in on the concept was to mentally go to the beginning of the event and back up a small delta in time. At this point the following was asked, "What SSCs and administrative controls are relied upon to, contain the hazard, indicate the hazard is contained or to alarm if the hazard becomes uncontained?". These were categorized as Normal Operational MPFs.
- Next, an Initiating Event Screen (IES) was performed for each positive event. This entailed answering two questions for each SSC. Does the SSC remain functional during the event; and does the SSC perform an MPF during the event? If the answer to both questions is "Yes" for a particular item (SSCs or admin. control) they are categorized as Post event MPFs. This list may contain items which are not on the Normal Operational MPF list. Because the assumption is that the event has already occurred, the Post Event MPFs are mitigative in nature.
- Lines of Defense (LOD) were then developed. A review was performed to identify how many LODs are available. This is necessary because several MPFs may be required to form one Line of Defense. For example, the exhaust fans maintain an area at a negative pressure versus the outside of the building and the filters reduce the amount of hazardous material released, but the two MPFs form one Line of Defense, that is building ventilation with filtered release. Lines of Defense can include administrative actions such as Emergency Plans, which provide for the evacuation of personnel and thus prevent the exposure of the receptor. The LOD list includes SSCs and administrative controls from both Normal and Post Event MPFs. Three categories were listed in this section; Barriers, Preventers and Mitigators.

Barriers

All barriers available under all operating conditions (startup, shutdown, normal, abnormal, accident etc.,) were listed. Barriers were listed in order starting with the one "closest" to the hazard and proceeding to the outermost. The primary and secondary barriers were identified.

Preventers

Preventers keep the event from happening. If an item doesn't help before the event occurs it is not a preventer.

Mitigators

Conversely to preventers, mitigators act after an event happens to reduce the consequences. If an item doesn't help after an event occurs it is not a mitigator.

- A Summary table was developed showing the number of Normal Operational MPFs, the number of Post Event MPFs and the Lines of Defense for each positive event.
- The screening forms and the summary table are presented in Appendices A, B, and C of this report.

The approach outlined above works well for accident type events (i.e., pipe break leading to cell overflow). Some events were non accident type (i.e., CAM fails when there is airborne activity, breathing air fails while there is airborne activity). In the latter case some of the thought processes implied by the above direction aren't directly applicable. For example, it was difficult to define the source of the hazard and the normal barrier for the hazard. The analyst had to remember that the overall purpose of the DIDE program is to define the Defense-In-Depth for the facility, not to show some minimum level of DID or to classify equipment as safety related. Adding to the list does no harm as long as there is a justifiable thought process involved. The product of the effort is a laundry list of all that is available in the facility to guard against the release of material.

In event number HV-01, the PHR determined that no criteria were exceeded (i.e., if the above guidance had been followed verbatim, this would have resulted in a negative screen). The DID evaluators reviewed the information in the PHR and concluded that credit was taken for SSCs or administrative controls to reach this conclusion. In addition it was known that the hydrogen explosion event is extensively evaluated in the SER (draft). Because of this, the decision was made to make this event result in a positive screen. This is the only event where the DID evaluation took exception to the consequence findings of the PHR and represents a more conservative approach.

Three events were identified that are standard SAR type accidents for which the facility was known to have Defense-In-Depth that were not evaluated in the PPHR. The three events and the thought process unique to each are given below.

EVENT	DESCRIPTION	DISCUSSION
Earthquake	Earthquake leads to ventilation system shutdown and Hydrogen Explosion	An earthquake was not evaluated in the PHR, however it is a standard SAR type accident. Even though the earthquake and HV-01 result in the same accident (i.e., hydrogen explosion) a different list of items results because of the likelihood of structural failures of buildings and/or equipment due to the earthquake.
Wind	Wind leads to ventilation system shutdown and Hydrogen Explosion	A Design basis Straight wind or tornado was not evaluated in the PHR, however it is a standard SAR type accident. Even though the Wind event and HV-01 result in the same accident (i.e., hydrogen explosion) a different list of items results because of the likelihood of structural failures of buildings and/or equipment due to the event.
Loss of Power	Loss of normal power to NWTF (No particular release postulated)	In evaluating the events discussed in the PHR it was realized that the Defense-In-Depth provided by the diesel generator/battery/UPS had not shown up anywhere. This event was created as a vehicle to advertise these SSCs

4.2 WORKER PROTECTION

References 3 and 5 direct that SSCs and Administrative Controls that are significant contributors to protection of the workers be designated as Safety Significant and protected in the OSRs. As an input to the Functional Classification, Appendix D was prepared to provide suggestions for consideration as worker protection items. The items listed are those that appear to provide significant protection for the workers. They are based on judgment of the analyst using the conclusions of the PPHR. The Functional Classification will be based on the SER which will have better estimates of consequence and frequency. The interim Functional Classification for NWTF will evaluate the facility and make the final determination of Classifications.

5.0 ASSUMPTIONS

1. The consequences postulated in the PHR were assumed to be correct even in those cases where the judgment of the analysts was that they were conservative (See Assumption 3 for one exception).
2. The events in the PHR are assumed to be credible (i.e., the frequency of occurrence is $>1 \text{ E-6}$ per year).
3. The consequences to one event, HV-01, were assumed to be worse than those postulated in the PHR. It was known that the Safety Evaluation was extensively evaluating this event and the analysts believed it was not prudent to eliminate it in the screening stage.
4. The events evaluated were taken from the PHR. The determinations of equipment failures were based on the information contained in the PHR. The equipment assumed to fail is limited to that specified in the hazard description except in cases where the postulated failure causes other failures. No failed equipment is listed as a Post Event MPF. For example in event CDB-8, which postulated failure of the wiring or electrical connectors to a cell, none of the electrical equipment in the cell is listed in the Post Event MPF list.
5. Each hazard description in the Appendices has specific information on the failures and event progression used in the evaluation. This information represents the analysts understanding of the PHR event. This information is contained inside parenthesis to distinguish it from the hazard description quoted from the PHR.

6.0 CONCLUSIONS

This report documents the Defense-In-Depth which exists for the NWTF based on the hazards and hazard release scenarios evaluated in the PHR. The conclusions of this study are shown in the Lines of Defense summary table contained in Appendix C. The events and Lines of Defense were reviewed to determine Suggested Worker Protection Items for consideration in the Functional Classification evaluation. These are documented in Appendix D. A review of the summary table in Appendix C shows a high degree of Defense-in-Depth. For each hazard event there are multiple Lines of Defense that show adequate protection of the receptors (worker, public and the environment) from exposures to hazardous material.

7.0 REFERENCES

1. R. S. Tran, "Preoperational Process Hazards Review for New Waste Transfer Facility," PHR 200-H-484, Revision 1, May 14, 1993.
2. Nuclear Safety Analysis Reports, DOE Order 5480.23, USDOE, April 30, 1992
3. Preparation Guide for U. S. Department of Energy Nonreactor Nuclear Facility Safety Analysis Reports, DOE-STD-3009-94, USDOE, July 1994
4. New Waste Transfer Facility - Savannah River Plant, Design Criteria, A00369, Project S-3122, E. I. Du Pont de Nemours & Co., Inc., April 1985.
5. Functional Classification, Procedure 2.25, Rev. 2, Procedure Manual E7, Westinghouse Savannah River Site, Savannah River Site, Aiken, SC. September 15, 1994.

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APPENDIX A

**HAZARD EVENT
SCREENING FORMS**

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PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484 Rev. 1
HAZARD NUMBER: CBD-1
HAZARD DESCRIPTION: Liquid Release - The primary pump for a tank fails

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered **"NO"**, then do not continue with the rest of the evaluation. Mark Section D **"RESULTS"** as **"NEGATIVE"** and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If **"NO"** provide justification in the comments section.

YES

☒

NO

☐

Comments:

NA

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be **"Yes"**. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as **"NO"**. References shall be provided in the **'comments'** section for all **"NO"** responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☒

NO

☐

Comments:

NOTE: If **Question 2** was answered **"YES"** then Part B is **POSITIVE**

POSITIVE

☒

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CBD-1
HAZARD DESCRIPTION Liquid Release - The primary pump for a tank fails

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

John L. Kelly

1/9/95
ENGINEER/DATE

Shamuel Dwyer 1/9/95

TECHNICAL REVIEWER/DATE

**PROCESS HAZARD REVIEW
SCREENING FORM**

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-2
HAZARD DESCRIPTION: Loss of Production - A tank agitator fails

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered **"NO"**, then do not continue with the rest of the evaluation. Mark Section D **"RESULTS"** as **"NEGATIVE"** and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If **"NO"** provide justification in the comments section.

YES ☐ NO ☒

Comments:

The PHR did not list any of the criteria for personnel exposure as being exceeded or indicate there was any release of material.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the **'comments'** section for all **'NO'** responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE**

POSITIVE ☐ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-2
HAZARD DESCRIPTION Loss of Production - A tank agitator fails

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE then the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

1/9/95
ENGINEER/DATE

1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-3
HAZARD DESCRIPTION: Loss of Production - A jet pump for a tank fails

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered **"NO"**, then do not continue with the rest of the evaluation. Mark Section D **"RESULTS"** as **"NEGATIVE"** and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If **"NO"** provide justification in the comments section.

YES

☐

NO

☒

Comments:

The PHR did not list any of the criteria for personnel exposure as being exceeded or indicate there was any release of material.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is **POSITIVE**

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-3
HAZARD DESCRIPTION Loss of Production - A jet pump for a tank fails

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality?

YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem?

YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem?

YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3?

YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2?

YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality?

YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-4
HAZARD DESCRIPTION: Liquid Release - The jet pump for a sump fails

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If " **NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be '**Yes**'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE** POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-4
HAZARD DESCRIPTION Liquid Release - The jet pump for a sump fails

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

The PHR did not list any of the criteria for personnel exposure as being exceeded .

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: CDB-5

HAZARD DESCRIPTION: Liquid Release - A tank leaks or fails.

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is **POSITIVE** POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-5
HAZARD DESCRIPTION Liquid Release - A tank leaks or fails.

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

John L. Kelly

ENGINEER/DATE

1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-6
HAZARD DESCRIPTION: Liquid Release - The level instrumentation in the tank fails

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

NO

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the 'comments' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE**

POSITIVE

NEGATIVE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-6
HAZARD DESCRIPTION Liquid Release - The level instrumentation in the tank fails

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

The PHR did not list any of the criteria for personnel exposure as being exceeded.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-7
HAZARD DESCRIPTION: Liquid Release - The level instrumentation in the sump fails

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☒

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☒

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE

☒

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-7
HAZARD DESCRIPTION Liquid Release - The level instrumentation in the sump fails

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

John L. Kelly

John L. Kelly 1/4/95
ENGINEER/DATE

John L. Kelly 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-8
HAZARD DESCRIPTION: Liquid release / Loss of production - The wiring or electrical connectors to a cell fail

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE**

POSITIVE ☒ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-8
HAZARD DESCRIPTION Liquid release /Loss of production -The wiring or electrical connectors to a cell fail

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were **POSITIVE** than the results are **POSITIVE**

POSITIVE ☒ NEGATIVE ☐

John L. Kelly

1/9/95
ENGINEER/DATE

1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-9
HAZARD DESCRIPTION: The "what if" for this event is -installed material not per design

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered **"NO"**, then do not continue with the rest of the evaluation. Mark Section D **"RESULTS"** as **"NEGATIVE"** and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If " NO" provide justification in the comments section.

YES ☐ NO ☒

Comments:

This event is beyond the scope of a DID analysis.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is **POSITIVE**

POSITIVE ☐ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-9
HAZARD DESCRIPTION The "what if" for this event is -installed material not per design

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

This event is beyond a DID analysis. It is assumed for a DID analysis that the facility is built as designed.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were **POSITIVE** than the results are **POSITIVE**

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

1/9/95
ENGINEER/DATE

2/8/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: CDB-10

HAZARD DESCRIPTION: Airborne Release/Personnel Exposure - Pipes in pipe chase leak

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☒

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☒

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE

☒

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-10
HAZARD DESCRIPTION Airborne Release/Personnel Exposure - Pipes in pipe chase leak

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality?

YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem?

YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem?

YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3?

YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2?

YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality?

YES ☐ NO ☒

Comments:

The PHR did not list any of the criteria for personnel exposure as being exceeded.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

1/9/95
ENGINEER/DATE

1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-11
HAZARD DESCRIPTION: Equipment Damage - A nozzle is bent

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "NO", then do not continue with the rest of the evaluation. Mark Section D "RESULTS" as "NEGATIVE" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard OR can this event cause the release of radioactive material or hazardous chemicals? If "NO" provide justification in the comments section.

YES

☐

NO

☒

Comments:

The PHR did not list any of the criteria for personnel exposure as being exceeded or indicate there was any release of material.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE

☒

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-11
HAZARD DESCRIPTION Equipment Damage - A nozzle is bent

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality?

YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem?

YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem?

YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3?

YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2?

YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality?

YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

1/9/95
ENGINEER/DATE

1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: CDB-12

HAZARD DESCRIPTION: Liquid Release/Loss of Production - A cell jumper fails

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☒

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☒

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE

☒

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-12
HAZARD DESCRIPTION Liquid Release/Loss of Production - A cell jumper fails

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

John L. Kelly

John L. Kelly 1/4/95
ENGINEER/DATE

242 Hayer 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-13
HAZARD DESCRIPTION: Liquid Release - A jumper Leaks

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the 'comments' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE**

POSITIVE ☒ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-13
HAZARD DESCRIPTION Liquid Release - A jumper Leaks

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

John L. Kelly

1/9/95
ENGINEER/DATE

2H Hager
1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-14
HAZARD DESCRIPTION: Liquid Release/Equipment Damage - Jumper not tightened correctly

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-14
HAZARD DESCRIPTION Liquid Release/Equipment Damage - Jumper not tightened correctly

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

John L. Kelly

John L. Kelly 1/9/95
ENGINEER/DATE

John Hoyer 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484 Rev. 1
HAZARD NUMBER: CDB-15
HAZARD DESCRIPTION: Liquid Release - Automatic or manual valve in a jumper fails

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered **"NO"**, then do not continue with the rest of the evaluation. Mark Section D **"RESULTS"** as **"NEGATIVE"** and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If **"NO"** provide justification in the comments section.

YES

☒

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be **'Yes'**. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as **'NO'**. References shall be provided in the 'comments' section for all **'NO'** responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☒

NO

☐

Comments:

NOTE: If Question 2 was answered **'YES'** then Part B is **POSITIVE**

POSITIVE

☒

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-15
HAZARD DESCRIPTION Liquid Release - Automatic or manual valve in a jumper fails

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

John L. Kelly

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-16
HAZARD DESCRIPTION: Liquid Release - Cell Liner Leaks

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered **"NO"**, then do not continue with the rest of the evaluation. Mark Section D **"RESULTS"** as **"NEGATIVE"** and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If **"NO"** provide justification in the comments section.

YES

☒

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be **"Yes"**. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as **"NO"**. References shall be provided in the **'comments'** section for all **'NO'** responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☒

NO

☐

Comments:

NOTE: If **Question 2** was answered **"YES"** then Part B is **POSITIVE**

POSITIVE

☒

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-16
HAZARD DESCRIPTION Liquid Release - Cell Liner Leaks

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality?

YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem?

YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem?

YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3?

YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2?

YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality?

YES ☐ NO ☒

Comments:

The PHR did not list any of the criteria for personnel exposure as being exceeded.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-17
HAZARD DESCRIPTION: Liquid Release/Airborne Release/Equipment Damage - Instrument Air is Lost

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☒

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☒

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is **POSITIVE**

POSITIVE

☒

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-17
HAZARD DESCRIPTION Liquid Release/Airborne Release/Equipment Damage - Instrument Air is Lost

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

John L. Kelly

John L. Kelly 1/9/95
ENGINEER/DATE

W. Hays 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-18
HAZARD DESCRIPTION: Airborne Release - Loss of Power

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☒

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☒

NO

☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE**

POSITIVE

☒

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-18
HAZARD DESCRIPTION Airborne Release - Loss of Power

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

The PHR did not list any of the criteria for personnel exposure as being exceeded.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were **POSITIVE** than the results are **POSITIVE**

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

**PROCESS HAZARD REVIEW
SCREENING FORM**

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: CDB-19

HAZARD DESCRIPTION: Liquid Release - Air to jet is lost

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

NO

Comments:

=====

3. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be '**Yes**'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE**

POSITIVE

NEGATIVE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-19
HAZARD DESCRIPTION Liquid Release - Air to jet is lost

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE then the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

John L. Kelly

1/14/95
ENGINEER/DATE

1/19/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-20
HAZARD DESCRIPTION: Liquid Release - Steam to jet is lost

=====

G **GENERAL INSTRUCTIONS:**

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is **POSITIVE** POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-20
HAZARD DESCRIPTION Liquid Release - Steam to jet is lost

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality?

YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem?

YES ☒ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem?

YES ☒ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3?

YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2?

YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality?

YES ☐ NO ☒

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

John L. Kelly

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-21
HAZARD DESCRIPTION: None - Flushwater to jets is lost

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered **"NO"**, then do not continue with the rest of the evaluation. Mark Section D **"RESULTS"** as **"NEGATIVE"** and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If **"NO"** provide justification in the comments section.

YES ☐ NO ☒

Comments:

PHR assessment reveals no hazard for this event

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be **"Yes"**. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as **"NO"**. References shall be provided in the **'comments'** section for all **"NO"** responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If Question 2 was answered **"YES"** then Part B is **POSITIVE** POSITIVE ☐ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-21
HAZARD DESCRIPTION None - Flushwater to jets is lost

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

PHR lists no hazard for this event

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: CDB-22

HAZARD DESCRIPTION: Liquid Release/Airborne Release/Equipment Damage - The gang valve is miss-positioned.

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered **"NO"**, then do not continue with the rest of the evaluation. Mark Section D **"RESULTS"** as **"NEGATIVE"** and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If **"NO"** provide justification in the comments section.

YES

☒

NO

☐

Comments:

There are two consequences listed for a gang valve sticking open: the first is tank overflow which is the cause of the release and the second is overheating/overpressurizing a tank which results in equipment damage but no release. The rest of this form only deals with the overflow

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be **"Yes"**. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as **"NO"**. References shall be provided in the 'comments' section for all **"NO"** responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☒

NO

☐

Comments:

NOTE: If **Question 2** was answered **"YES"** then Part B is **POSITIVE**

POSITIVE

☒

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-22
HAZARD DESCRIPTION Liquid Release/Airborne Release/Equipment Damage - The gang valve is miss-positioned.

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were **POSITIVE** than the results are **POSITIVE**

POSITIVE ☒ NEGATIVE ☐

John L. Kelly

John L. Kelly 1/9/95
ENGINEER/DATE

282 Hayer 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-23
HAZARD DESCRIPTION: This event was deleted.

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered **"NO"**, then do not continue with the rest of the evaluation. Mark Section D "RESULTS" as "NEGATIVE" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "NO" provide justification in the comments section.

YES

☐

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev. 1

HAZARD NUMBER CDB-23

HAZARD DESCRIPTION This event was deleted.

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

This event was deleted

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

John L. Kelly 1/9/95
ENGINEER/DATE

24 Hayes 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-24
HAZARD DESCRIPTION: Airborne Release -Tank becomes pressurized or is under excess vacuum

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered **"NO"**, then do not continue with the rest of the evaluation. Mark Section D **"RESULTS"** as **"NEGATIVE"** and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If **"NO"** provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-24
HAZARD DESCRIPTION Airborne Release - Tank becomes pressurized or is under excess vacuum

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

The PHR did not list any of the criteria for personnel exposure as being exceeded.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly 2/2/95 1/9/95
ENGINEER/DATE

2/2/95 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: CDB-25

HAZARD DESCRIPTION: Airborne Release - Tank is heated

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is POSITIVE POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-25
HAZARD DESCRIPTION Airborne Release - Tank is heated

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

The PHR did not list any of the criteria for personnel exposure as being exceeded.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

John L. Kelly 1/9/95
ENGINEER/DATE

202 Hay 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: CDB-26

HAZARD DESCRIPTION: Personnel Exposure - Equipment and/or cell cannot be flushed

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☒

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☒

NO

☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE**

POSITIVE

☒

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-26
HAZARD DESCRIPTION Personnel Exposure - Equipment and/or cell cannot be flushed

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

The PHR did not list any of the criteria for personnel exposure as being exceeded.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

1/9/95
ENGINEER/DATE

1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-27
HAZARD DESCRIPTION: Personnel Exposure - An inadvertent transfer is made to/from or within the NWTF.

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard OR can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☒

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☒

NO

☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE**

POSITIVE

☒

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-27
HAZARD DESCRIPTION Personnel Exposure - An inadvertent transfer is made to/from or within the NWTF.

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

The PHR did not list any of the criteria for personnel exposure as being exceeded.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

ENGINEER/DATE

1/9/95

2/8/95

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: CDB-28

HAZARD DESCRIPTION: Airborne Release - A cell cover is dropped

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☒

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☒

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is **POSITIVE**

POSITIVE

☒

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-28
HAZARD DESCRIPTION Airborne Release - A cell cover is dropped

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

The PHR did not list any of the criteria for personnel exposure as being exceeded.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-29
HAZARD DESCRIPTION: Equipment Damage - The wrong cell cover is pulled

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☐ NO ☒

Comments:

The PHR has the consequences as damage to a cell cover and/or a dropped cell cover. The first is simply equipment damage. See CDB-28 for the second event.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE ☐ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-29
HAZARD DESCRIPTION Equipment Damage - The wrong cell cover is pulled

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both **Parts B and C** were **POSITIVE** than the results are **POSITIVE**

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

John L. Kelly 1/9/95
ENGINEER/DATE

John L. Kelly 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-30
HAZARD DESCRIPTION: Equipment Damage/Personnel Injury -A piece of equipment is dropped

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☐

NO

☒

Comments:

Dropping a piece of equipment from a crane is a standard industrial accident. By procedure the tanks are empty before conducting maintenance so there is a negligible amount of material to be released.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE**

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-30
HAZARD DESCRIPTION Equipment Damage/Personnel Injury -A piece of equipment is dropped

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were **POSITIVE** than the results are **POSITIVE**

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

1/9/95
ENGINEER/DATE

24 Daye 1/9/95

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: CBD-31

HAZARD DESCRIPTION: Event deleted

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard OR can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☐

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE**

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CBD-31
HAZARD DESCRIPTION Event deleted

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

This event was deleted.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: CDB-32

HAZARD DESCRIPTION: Equipment Damage - A pump or agitator becomes unbalanced

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☐

NO

☒

Comments:

This event results in loss of use of the equipment with no release

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-32
HAZARD DESCRIPTION Equipment Damage - A pump or agitator becomes unbalanced

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-33
HAZARD DESCRIPTION: Liquid Release - A pump or motor flies apart

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered **"NO"**, then do not continue with the rest of the evaluation. Mark Section D **"RESULTS"** as **"NEGATIVE"** and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If **"NO"** provide justification in the comments section.

YES

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be **'Yes'**. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as **'NO'**. References shall be provided in the **'comments'** section for all **'NO'** responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

☐

Comments:

NOTE: If Question 2 was answered **'YES'** then Part B is **POSITIVE**

POSITIVE

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-33
HAZARD DESCRIPTION Liquid Release - A pump or motor flies apart

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☒ NEGATIVE ☒

John L. Kelly

1/9/95
ENGINEER/DATE

1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-34
HAZARD DESCRIPTION: Liquid Release - A pump tank overflows

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☒

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be '**Yes**'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☒

NO

☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE**

POSITIVE

☒

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-34
HAZARD DESCRIPTION Liquid Release - A pump tank overflows

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

John L. Kelly John L. Kelly 1/9/95
ENGINEER/DATE

28 Hays 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: CDB-35

HAZARD DESCRIPTION: Equipment Damage - The cell floods

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then *do not* continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard OR can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☐

NO

☒

Comments:

This event was assessed from the perspective of if the cell were to flood would it cause the tank to shift and damage the jumpers. The results of the assessment were that the the tank would not shift but some damage may occur.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-35
HAZARD DESCRIPTION Equipment Damage - The cell floods

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality?

YES

☐

NO

☐

OR

4.) Can the event cause a an On-site exposure of 5 rem?

YES

☐

NO

☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem?

YES

☐

NO

☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3?

YES

☐

NO

☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2?

YES

☐

NO

☐

OR

8.) Can the event cause an uncontrolled nuclear criticality?

YES

☐

NO

☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE

☐

NEGATIVE

☐

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE

☐

NEGATIVE

☒

John L. Kelly

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-36
HAZARD DESCRIPTION: Liquid Release - The cell overflows

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☒

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☒

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE

☒

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-36
HAZARD DESCRIPTION Liquid Release - The cell overflows

C. CONSEQUENCE CRITERIA

- 3.) Can the event cause a fatality? YES ☐ NO ☒
- OR
- 4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐
- OR
- 5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐
- OR
- 6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒
- OR
- 7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒
- OR
- 8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

John L. Kelly

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-37
HAZARD DESCRIPTION: Airborne Release - Valve Box Drain Plugs

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☒

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☒

NO

☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE**

POSITIVE

☒

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-37
HAZARD DESCRIPTION Airborne Release - Valve Box Drain Plugs

C. CONSEQUENCE CRITERIA

- 3.) Can the event cause a fatality? YES ☐ NO ☒
- OR
- 4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒
- OR
- 5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒
- OR
- 6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒
- OR
- 7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒
- OR
- 8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

The PHR did not list any of the criteria for personnel exposure as being exceeded.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

ENGINEER/DATE

242 Dayn 1/9/95

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-38
HAZARD DESCRIPTION: Equipment Damage - A cell is sprayed down, will equipment damage result

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered **"NO"**, then *do not* continue with the rest of the evaluation. Mark Section D **"RESULTS"** as **"NEGATIVE"** and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If **"NO"** provide justification in the comments section.

YES ☐ NO ☒

Comments:

This event examines whether spraying down a cell will cause equipment damage. No release is expected.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be **"Yes"**. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as **"NO"**. References shall be provided in the **'comments'** section for all **"NO"** responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If **Question 2** was answered **"YES"** then Part B is **POSITIVE** POSITIVE ☐ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-38
HAZARD DESCRIPTION Equipment Damage - A cell is sprayed down, will equipment damage result

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

John L. Kelly 1/4/95
ENGINEER/DATE

28 Dwyer 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-39
HAZARD DESCRIPTION: Personnel Exposure - Will liquid in a pipe chase cause a shine problem.

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered **"NO"**, then *do not* continue with the rest of the evaluation. Mark Section D **"RESULTS"** as **"NEGATIVE"** and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If **"NO"** provide justification in the comments section.

YES

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be **'Yes'**. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as **'NO'**. References shall be provided in the **'comments'** section for all **'NO'** responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

☐

Comments:

NOTE: If **Question 2** was answered **'YES'** then Part B is **POSITIVE**

POSITIVE

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-39
HAZARD DESCRIPTION Personnel Exposure - Will liquid in a pipe chase cause a shine problem.

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

The Design Of The Facility Adequately Shields The Worker.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were **POSITIVE** than the results are **POSITIVE**

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

1/9/95
ENGINEER/DATE

1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: CDB-40

HAZARD DESCRIPTION: Personnel Exposure - Weephole for electrical connectors create a path for the spread of contamination and result in an exposure

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE**

POSITIVE

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev. 1

HAZARD NUMBER CDB-40

HAZARD DESCRIPTION Personnel Exposure - Weephole for electrical connectors create a path for the spread of contamination and result in an exposure

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

The penetrations are sealed.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

D. Results

NOTE: If both Parts B and C were **POSITIVE** than the results are **POSITIVE**

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: CDB-41

HAZARD DESCRIPTION: Airborne Release - Liquid is backflowed chemical addition or flushwater line.

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "NO", then do not continue with the rest of the evaluation. Mark Section D "RESULTS" as "NEGATIVE" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard OR can this event cause the release of radioactive material or hazardous chemicals? If "NO" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-41
HAZARD DESCRIPTION Airborne Release - Liquid is backflowed chemical addition or flushwater line.

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality?

YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem?

YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem?

YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3?

YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2?

YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality?

YES ☐ NO ☒

Comments:

The design of the lines prevents backflow.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: CDB-42

HAZARD DESCRIPTION: Airborne Release - The chemical addition lines become contaminated.

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "NO", then do not continue with the rest of the evaluation. Mark Section D "RESULTS" as "NEGATIVE" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard OR can this event cause the release of radioactive material or hazardous chemicals? If "NO" provide justification in the comments section.

YES

NO

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE

NEGATIVE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-42
HAZARD DESCRIPTION Airborne Release - The chemical addition lines become contaminated.

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality?

YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem?

YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem?

YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3?

YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2?

YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality?

YES ☐ NO ☒

Comments:

Design of lines will minimize this event

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-43
HAZARD DESCRIPTION: Chemical Release - The chemical truck is leaking

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard OR can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE**

POSITIVE

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-43
HAZARD DESCRIPTION Chemical Release - The chemical truck is leaking

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

This event is not expected to result in the exceedance of any exposure limits.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

D. Results

NOTE: If both Parts B and C were POSITIVE then the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484 Rev. 1
HAZARD NUMBER: CDB-44
HAZARD DESCRIPTION: See CDB-24,25 for this event - Adverse chemical reaction in a tank

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☐

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE**

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-44
HAZARD DESCRIPTION See CDB-24,25 for this event - Adverse chemical reaction in a tank

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality?

YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem?

YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem?

YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3?

YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2?

YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality?

YES ☐ NO ☐

Comments:

The PHR did not address this event directly, it referred the reviewer to two previous events (CDB-24,25)

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were **POSITIVE** than the results are **POSITIVE**

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

John L. Kelly 1/9/95
ENGINEER/DATE

John L. Kelly 1/9/95
TECHNICAL REVIEWER/DATE

**PROCESS HAZARD REVIEW
SCREENING FORM**

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-45
HAZARD DESCRIPTION: None - Agitator lube oil reacts adversely with tank contents

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard OR can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☐

NO

☒

Comments:

No adverse consequences were noted for this event in the PHR.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be '**Yes**'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE**

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-45
HAZARD DESCRIPTION None - Agitator lube oil reacts adversely with tank contents

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

**PROCESS HAZARD REVIEW
SCREENING FORM**

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-46
HAZARD DESCRIPTION: None - Lube oil tank overflows

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "NO", then do not continue with the rest of the evaluation. Mark Section D "RESULTS" as "NEGATIVE" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard OR can this event cause the release of radioactive material or hazardous chemicals? If "NO" provide justification in the comments section.

YES

☐

NO

☒

Comments:

Lube oil is a common industrial material and the overflow does not result in a release of radioactive or hazardous material.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-46
HAZARD DESCRIPTION None - Lube oil tank overflows

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality?

YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem?

YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem?

YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3?

YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2?

YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality?

YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-47
HAZARD DESCRIPTION: Airborne Release - Lube oil tank catches on fire

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE** POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-47
HAZARD DESCRIPTION Airborne Release - Lube oil tank catches on fire

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

John L. Kelly

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-48
HAZARD DESCRIPTION: Personnel Exposure - Criticality

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then *do not* continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

NO

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE**

POSITIVE

NEGATIVE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-48
HAZARD DESCRIPTION Personnel Exposure - Criticality

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

The PHR did not list any of the criteria for personnel exposure as being exceeded.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

D. Results

NOTE: If both Parts B and C were **POSITIVE** than the results are **POSITIVE**

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: CDB-49

HAZARD DESCRIPTION: See event CDB-25 for this event -Airflow is insufficient to keep tank cool.

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence

The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "NO", then do not continue with the rest of the evaluation. Mark Section D "RESULTS" as "NEGATIVE" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "NO" provide justification in the comments section.

YES

☐

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE

☒

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-49
HAZARD DESCRIPTION See event CDB-25 for this event -Airflow is insufficient to keep tank cool.

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

See CDB-25 for development and consequences of this event.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

1/9/95
ENGINEER/DATE

2/1/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-50
HAZARD DESCRIPTION: Equipment Damage - Tank connection (acme nut) is overtightened.

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☐ NO ☒

Comments:

This event results in the inability to remove an affected piece of equipment without a major effort. No release of material occurs.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE**

POSITIVE ☐ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-50
HAZARD DESCRIPTION Equipment Damage - Tank connection (acme nut) is overtightened.

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: CDB-51

HAZARD DESCRIPTION: Personnel Exposure -Personnel are excessively exposed during normal operations.

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard OR can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is POSITIVE POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-51
HAZARD DESCRIPTION Personnel Exposure -Personnel are excessively exposed during normal operations.

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

The PHR did not list any of the criteria for personnel exposure as being exceeded.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

John L. Kelly 1/9/95
ENGINEER/DATE

20 Hays 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-52
HAZARD DESCRIPTION: Airborne Release - Both fans running at the same time causes HEPA filter to blow out.

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

NO

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be '**Yes**'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE**

POSITIVE

NEGATIVE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-52
HAZARD DESCRIPTION Airborne Release - Both fans running at the same time causes HEPA filter to blow out.

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

The PHR did not list any of the criteria for personnel exposure as being exceeded.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

John L. Kelly 1/9/95
ENGINEER/DATE

202 Hays 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484 Rev. 1
HAZARD NUMBER: CDB-53
HAZARD DESCRIPTION: Personnel Exposure - Damper closes before fan stops causing a pressure wave back to filter housing

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

Contamination may enter High Bay area but will not go into occupied areas.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be '**Yes**'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE**

POSITIVE ☒ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-53
HAZARD DESCRIPTION Personnel Exposure - Damper closes before fan stops causing a pressure wave back to filter housing

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

Contamination may enter High Bay area but will not go into occupied areas.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

John L. Kelly 1/9/95
ENGINEER/DATE

John L. Kelly 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: CDB-54
HAZARD DESCRIPTION: Inadvertent Transfer -More than one jet isolation valve opens

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then *do not* continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☐

NO

☒

Comments:

No release occurs from this event

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE**

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CDB-54
HAZARD DESCRIPTION Inadvertent Transfer - More than one jet isolation valve opens

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were **POSITIVE** than the results are **POSITIVE**

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

1/7/95
ENGINEER/DATE

1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: HV-O1 a & b

HAZARD DESCRIPTION: Airborne Contamination Release, Vessel vent System fails or Building Ventilation System fails

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "NO", then do not continue with the rest of the evaluation. Mark Section D "RESULTS" as "NEGATIVE" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "NO" provide justification in the comments section.

YES

NO

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE

NEGATIVE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER HV-O1 a & b
HAZARD DESCRIPTION Airborne Contamination Release, Vessel vent System fails or Building Ventilation System fails

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☒ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR TAKES CREDIT FOR MITIGATORS AND PREVENTERS TO ARRIVE AT THE CONCLUSION THAT THERE ARE NO EXPOSURE CONSEQUENCES.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

Thomas G. Hayes

THG 1/9/95
ENGINEER/DATE

[Signature] 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: HV-O2

HAZARD DESCRIPTION: AIRBORNE RELEASE OF RADIOACTIVITY, WATER PRESENT IN HV SYSTEM

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard OR can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE** POSITIVE ☒ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER HV-02
HAZARD DESCRIPTION AIRBORNE RELEASE OF RADIOACTIVITY, WATER PRESENT IN HV SYSTEM

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

ENGINEER/DATE

11/9/95
11/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: HV-Q3 a & b
HAZARD DESCRIPTION: AIRBORNE CONTAMINATION RELEASE, VESSEL VENT FILTER OR BUILDING
FILTER RUPTURES, FAILS

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "NO", then *do not* continue with the rest of the evaluation. Mark Section D "RESULTS" as "NEGATIVE" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard OR can this event cause the release of radioactive material or hazardous chemicals? If "NO" provide justification in the comments section.

YES

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER HV-O3 a & b
HAZARD DESCRIPTION AIRBORNE CONTAMINATION RELEASE, VESSEL VENT FILTER OR BUILDING
FILTER RUPTURES, FAILS

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality?

YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem?

YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem?

YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3?

YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2?

YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality?

YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part
C is Positive.

POSITIVE ☐ NEGATIVE ☒

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are
POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES TD Hayes 1/9/95
ENGINEER/DATE

1-52 Kelly 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: HV-O4
HAZARD DESCRIPTION: LIQUID RELEASE OF RADIOACTIVITY, RADIOACTIVE SOLUTION GETS INTO REHEATER STEAM CONDENSATE SYSTEM

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE**

POSITIVE ☒ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER HV-O4
HAZARD DESCRIPTION LIQUID RELEASE OF RADIOACTIVITY, RADIOACTIVE SOLUTION GETS INTO REHEATER STEAM CONDENSATE SYSTEM

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality?

YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem?

YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem?

YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3?

YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2?

YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality?

YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

TH Hayes 1/9/95
ENGINEER/DATE

Ch 2/1/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484 Rev. 1
HAZARD NUMBER: HV-Q5 a & b
HAZARD DESCRIPTION: AIRBORNE OR LIQUID RELEASE OF RADIOACTIVITY, STEAM REHEATER COIL LEAK OR LOSS OF STEAM, ELECTRICITY

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

NO

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE**

POSITIVE

NEGATIVE

**PROCESS HAZARD REVIEW
SCREENING FORM**

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER HV-O5 a & b
HAZARD DESCRIPTION AIRBORNE OR LIQUID RELEASE OF RADIOACTIVITY, STEAM REHEATER COIL
LEAK OR LOSS OF STEAM, ELECTRICITY

C. CONSEQUENCE CRITERIA

- 3.) Can the event cause a fatality? YES ☐ NO ☒
- OR
- 4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒
- OR
- 5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒
- OR
- 6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒
- OR
- 7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒
- OR
- 8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

ENGINEER/DATE

24 days 1/9/95

TECHNICAL REVIEWER/DATE

2526/1/9/95

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: HV-O6 a & b

HAZARD DESCRIPTION: AIRBORNE RELEASE OF RADIOACTIVITY, CONDENSER COIL FAILURE OR LOSS OF COOLANT

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be '**Yes**'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE**

POSITIVE

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER HV-O6 a & b
HAZARD DESCRIPTION AIRBORNE RELEASE OF RADIOACTIVITY, CONDENSER COIL FAILURE OR LOSS OF COOLANT

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were **POSITIVE** than the results are **POSITIVE**

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

ENGINEER/DATE

TH Hayes 1/9/95

TECHNICAL REVIEWER/DATE

SA 2 LG 1/9/95

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: HV-07 a & b

HAZARD DESCRIPTION: RADIATION EXPOSURE TO PERSONNEL OR LIQUID RELEASE, REFRIGERATION COOLANT LEAKS OUT TO H & V SYSTEM OR CONTAMINATION LEAKS INTO

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be '**Yes**'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

☐

Comments:

NOTE: If Question 2 was answered '**YES**' then Part B is **POSITIVE**

POSITIVE

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER HV-Q7 a & b
HAZARD DESCRIPTION RADIATION EXPOSURE TO PERSONNEL OR LIQUID RELEASE, REFRIGERATION
COOLANT LEAKS OUT TO H & V SYSTEM OR CONTAMINATION LEAKS INTO

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

ENGINEER/DATE

THG 1/9/95

TECHNICAL REVIEWER/DATE

1/9/95

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484 Rev. 1

HAZARD NUMBER: HV-Q8

HAZARD DESCRIPTION: DELETED

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☐ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE POSITIVE ☐ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER HV-08
HAZARD DESCRIPTION DELETED

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES THG 1/9/95
ENGINEER/DATE

TH 2/6/95 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: HV-O9
HAZARD DESCRIPTION: EQUIPMENT DAMAGE AIRBORNE RELEASE OF RADIOACTIVITY, ROOF IS DROPPED INTO VENTILATION CELL

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then *do not* continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE**

POSITIVE

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER HV-Q9
HAZARD DESCRIPTION EQUIPMENT DAMAGE AIRBORNE RELEASE OF RADIOACTIVITY, ROOF IS DROPPED INTO VENTILATION CELL

=====

C. CONSEQUENCE CRITERIA

- 3.) Can the event cause a fatality? YES ☐ NO ☒
- OR
- 4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒
- OR
- 5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒
- OR
- 6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒
- OR
- 7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒
- OR
- 8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES THG 1/9/95
ENGINEER/DATE

1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: HV-10
HAZARD DESCRIPTION: LIQUID RELEASE OF RADIOACTIVITY, FLUSHWATER CONTAMINATED FROM FLUSHING H & V SYSTEM

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

NO

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES

NO

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE**

POSITIVE

NEGATIVE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER HV-10
HAZARD DESCRIPTION LIQUID RELEASE OF RADIOACTIVITY, FLUSHWATER CONTAMINATED FROM FLUSHING H & V SYSTEM

C. CONSEQUENCE CRITERIA

- 3.) Can the event cause a fatality? YES ☐ NO ☒
- OR
- 4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒
- OR
- 5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒
- OR
- 6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒
- OR
- 7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒
- OR
- 8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: HV-11
HAZARD DESCRIPTION: DELETED

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence

The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☐

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER HV-11
HAZARD DESCRIPTION DELETED

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

TH Hayes 1/9/95
ENGINEER/DATE

Ph 2 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: HV-12
HAZARD DESCRIPTION: AIRBORNE RELEASE OF RADIOACTIVITY, DUCTWORK IS BREACHED

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

NO

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE**

POSITIVE

NEGATIVE

**PROCESS HAZARD REVIEW
SCREENING FORM**

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER HV-12
HAZARD DESCRIPTION AIRBORNE RELEASE OF RADIOACTIVITY. DUCTWORK IS BREACHED

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484 Rev. 1
HAZARD NUMBER: HV-13
HAZARD DESCRIPTION: AIRBORNE RELEASE OF RADIOACTIVITY, DEMISTER FAILS

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "NO", then do not continue with the rest of the evaluation. Mark Section D "RESULTS" as "NEGATIVE" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "NO" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER HV-13
HAZARD DESCRIPTION AIRBORNE RELEASE OF RADIOACTIVITY, DEMISTER FAILS

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

TH Hayes 1/9/95
ENGINEER/DATE

PH 2 Kelly 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: HV-14
HAZARD DESCRIPTION: AIRBORNE CONTAMINATION RELEASE, OFFGAS MONITORS OR SAMPLERS FAIL

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence

The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

NO

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is POSITIVE

POSITIVE

NEGATIVE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER HV-14
HAZARD DESCRIPTION AIRBORNE CONTAMINATION RELEASE, OFFGAS MONITORS OR SAMPLERS FAIL

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE then the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES THG 1/9/95
ENGINEER/DATE

1/9/95
TECHNICAL REVIEWER/DATE

**PROCESS HAZARD REVIEW
SCREENING FORM**

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: HV-15
HAZARD DESCRIPTION: AIRBORNE RELEASE OF RADIOACTIVITY, INSTRUMENT LINES BECOME
CONTAMINATED

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "NO", then do not continue with the rest of the evaluation. Mark Section D "RESULTS" as "NEGATIVE" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard OR can this event cause the release of radioactive material or hazardous chemicals? If "NO" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER HV-15
HAZARD DESCRIPTION AIRBORNE RELEASE OF RADIOACTIVITY, INSTRUMENT LINES BECOME CONTAMINATED

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

TH Hayes 1/9/95
ENGINEER/DATE

AS 2. 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: HV-16

HAZARD DESCRIPTION: LIQUID RELEASE OF RADIOACTIVITY, CONTAMINATED WATER IN THE PROCESS ROOM H & V

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "NO", then do not continue with the rest of the evaluation. Mark Section D "RESULTS" as "NEGATIVE" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard OR can this event cause the release of radioactive material or hazardous chemicals? If "NO" provide justification in the comments section.

YES

NO

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE

NEGATIVE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER HV-16
HAZARD DESCRIPTION LIQUID RELEASE OF RADIOACTIVITY, CONTAMINATED WATER IN THE PROCESS ROOM H & V

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES THG 1/9/95
ENGINEER/DATE

SHZ 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: HV-17
HAZARD DESCRIPTION: PERSONNEL EXPOSURE, RADIATION MONITORS FAIL

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "NO", then do not continue with the rest of the evaluation. Mark Section D "RESULTS" as "NEGATIVE" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "NO" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER HV-17
HAZARD DESCRIPTION PERSONNEL EXPOSURE, RADIATION MONITORS FAIL

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

TH Hayes
ENGINEER/DATE

1/10/01
TECHNICAL REVIEWER/DATE

**PROCESS HAZARD REVIEW
SCREENING FORM**

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: HV-18
HAZARD DESCRIPTION: AIRBORNE RELEASE OF RADIOACTIVITY, P-TRAPS FROM THE CONDENSER,
DEMISTER, OR REHEATER DRY UP

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE** POSITIVE ☒ NEGATIVE ☐

**PROCESS HAZARD REVIEW
SCREENING FORM**

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER HV-18
HAZARD DESCRIPTION AIRBORNE RELEASE OF RADIOACTIVITY, P-TRAPS FROM THE CONDENSER,
DEMISTER, OR REHEATER DRY UP

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES THG 1/9/95
ENGINEER/DATE

[Signature] 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: HV-19

HAZARD DESCRIPTION: AIRBORNE RELEASE OF RADIOACTIVITY, LOW VESSEL VENT H & V AIR FLOW
DUE TO DEMISTER OR HEPA PLUGGAGE

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE**

POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER HV-19
HAZARD DESCRIPTION AIRBORNE RELEASE OF RADIOACTIVITY, LOW VESSEL VENT H & V AIR FLOW
DUE TO DEMISTER OR HEPA PLUGGAGE

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

THG Hayes 1/9/95
ENGINEER/DATE

6/2/95 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: HV-20 a & b

HAZARD DESCRIPTION: LIQUID RELEASE OF RADIOACTIVITY, H & V CONDENSATE DRAIN LINE PLUGS
UPSTREAM OR DOWNSTREAM OF FLOOR DRAIN

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484 Rev. 1
HAZARD NUMBER HV-20 a & b
HAZARD DESCRIPTION LIQUID RELEASE OF RADIOACTIVITY, H & V CONDENSATE DRAIN LINE PLUGS
UPSTREAM OR DOWNSTREAM OF FLOOR DRAIN

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

TH Hayes 1/9/95
ENGINEER/DATE

266 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: HV-21

HAZARD DESCRIPTION: PERSONNEL EXPOSURE, AIRBORNE RELEASE, THE ICR CAM DETECTS
AIRBORNE CONTAMINATION

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE** POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER HV-21
HAZARD DESCRIPTION PERSONNEL EXPOSURE, AIRBORNE RELEASE, THE ICR CAM DETECTS
AIRBORNE CONTAMINATION

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

THG 1/9/95
ENGINEER/DATE

1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: HV-22
HAZARD DESCRIPTION: NONE, THE VACUUM SYSTEM FAILS

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "NO", then do not continue with the rest of the evaluation. Mark Section D "RESULTS" as "NEGATIVE" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "NO" provide justification in the comments section.

YES

☐

NO

☒

Comments:

SIMPLE EQUIPMENT FAILURE WHICH DOES NOT LEAD TO A RELEASE.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER HV-22
HAZARD DESCRIPTION NONE. THE VACUUM SYSTEM FAILS

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

THG 1/9/95
ENGINEER/DATE

[Signature] 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: HV-23

HAZARD DESCRIPTION: ENVIRONMENTAL HAZARD, CHEMICAL RELEASE, LEAKS ON THE GLYCOL CHILLER

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE**

POSITIVE ☒ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER HV-23
HAZARD DESCRIPTION ENVIRONMENTAL HAZARD, CHEMICAL RELEASE, LEAKS ON THE GLYCOL CHILLER

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES TH Hayes 1/9/95
ENGINEER/DATE

1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: E-1
HAZARD DESCRIPTION: FIRE, HALON IS ACCIDENTALLY DISCHARGED OR LEAKS

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☐ NO ☒

Comments:

FIRE AND HALON ARE STANDARD INDUSTRIAL HAZARDS

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE** POSITIVE ☐ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER F-1
HAZARD DESCRIPTION FIRE, HALON IS ACCIDENTALLY DISCHARGED OR LEAKS

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality?

YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem?

YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem?

YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3?

YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2?

YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality?

YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES TH Hayes 1/9/95
ENGINEER/DATE

1/9/95 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: F-2
HAZARD DESCRIPTION: DELETED

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence

The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☐

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE**

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER F-2
HAZARD DESCRIPTION DELETED

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If *any* of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

THG 1/9/95
ENGINEER/DATE

[Signature] 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: F-3

HAZARD DESCRIPTION: PERSONNEL EXPOSURE, CAMS FAIL

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

NO

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE

NEGATIVE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER F-3
HAZARD DESCRIPTION PERSONNEL EXPOSURE, CAMS FAIL

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

THOMAS G. HAYES

ENGINEER/DATE

TH Hayes 1/9/95

TECHNICAL REVIEWER/DATE

M2 1/9/95

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: E-4
HAZARD DESCRIPTION: AIRBORNE RELEASE OF RADIOACTIVITY, PROCESS BUILDING FIRE, FIRE IN HIGH BAY AREA

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard OR can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE** POSITIVE ☒ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER F-4
HAZARD DESCRIPTION AIRBORNE RELEASE OF RADIOACTIVITY, PROCESS BUILDING FIRE, FIRE IN HIGH BAY AREA

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

TH Hayes 1/9/95
ENGINEER/DATE

John 2.11/5 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: F-5
HAZARD DESCRIPTION: AIRBORNE RELEASE OF RADIOACTIVITY, PROCESS BUILDING FIRE, FIRE IN LOW BAY AREA

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

NO

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE**

POSITIVE

NEGATIVE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER F-5
HAZARD DESCRIPTION AIRBORNE RELEASE OF RADIOACTIVITY, PROCESS BUILDING FIRE, FIRE IN LOW BAY AREA

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

THG 1/9/95
ENGINEER/DATE

ASB 1/4/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: F-6
HAZARD DESCRIPTION: PERSONNEL EXPOSURE, STANDBY DIESEL POWER IS LOST

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE** POSITIVE ☒ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER F-6
HAZARD DESCRIPTION PERSONNEL EXPOSURE, STANDBY DIESEL POWER IS LOST

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES TH Hayes 1/9/95
ENGINEER/DATE

472 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: E-7
HAZARD DESCRIPTION: PERSONNEL EXPOSURE, AREA RADIATION MONITORS ARE LOST

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER F-7
HAZARD DESCRIPTION PERSONNEL EXPOSURE AREA RADIATION MONITORS ARE LOST

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

THOMAS G. HAYES

THG Hayes 1/9/95
ENGINEER/DATE

[Signature] 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: F-8

HAZARD DESCRIPTION: NONE, THE UPS FAILS

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☐

NO

☒

Comments:

SIMPLE EQUIPMENT FAILURE WHICH DOES NOT LEAD TO A RELEASE.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER E-8
HAZARD DESCRIPTION NONE, THE UPS FAILS

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

ENGINEER/DATE

TH Hayes 1/9/95

TECHNICAL REVIEWER/DATE

[Signature] 1/4/95

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: F-9
HAZARD DESCRIPTION: PERSONNEL INJURY, SAFETY SHOWER OR EYEWASH STATION IS LOST

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then *do not* continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☐ NO ☒

Comments:

The personnel injury in this case is associated with the potential to have acid burns from the batteries. This is a standard industrial hazard.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be '**Yes**'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE** POSITIVE ☐ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER F-9
HAZARD DESCRIPTION PERSONNEL INJURY, SAFETY SHOWER OR EYEWASH STATION IS LOST

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES Thomas G. Hayes 1/9/95
ENGINEER/DATE

PC Kly 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: E-10

HAZARD DESCRIPTION: PERSONNEL EXPOSURE, BREATHING AIR IS LOST

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

NO

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE**

POSITIVE

NEGATIVE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER F-10
HAZARD DESCRIPTION PERSONNEL EXPOSURE, BREATHING AIR IS LOST

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

THOMAS G. HAYES

ENGINEER/DATE

THG 1/9/95

TECHNICAL REVIEWER/DATE

BJL 1/9/95

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: F-11
HAZARD DESCRIPTION: EQUIPMENT DAMAGE, CHEMICAL RELEASE, DIESEL GENERATOR FUEL TANK
BURNS OR EXPLODES

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence

The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☒

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☒

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE

☒

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev. 1

HAZARD NUMBER F-11

HAZARD DESCRIPTION EQUIPMENT DAMAGE, CHEMICAL RELEASE, DIESEL GENERATOR FUEL TANK BURNS OR EXPLODES

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

The PHR did not list any of the criteria for personnel exposure as being exceeded.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: E-12
HAZARD DESCRIPTION: CHEMICAL RELEASE, DIESEL FUEL TANK LEAKS

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard OR can this event cause the release of radioactive material or hazardous chemicals? If " **NO**" provide justification in the comments section.

YES

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is **POSITIVE**

POSITIVE

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER F-12
HAZARD DESCRIPTION CHEMICAL RELEASE, DIESEL FUEL TANK LEAKS

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

The PHR did not list any of the criteria for personnel exposure as being exceeded.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

ENGINEER/DATE

TH Hayes 1/9/95

TECHNICAL REVIEWER/DATE

for 2 kg 1/9/95

**PROCESS HAZARD REVIEW
SCREENING FORM**

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: F-13
HAZARD DESCRIPTION: EQUIPMENT DAMAGE, FIRE SPRINKLER SYSTEM FREEZES

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☐ NO ☒

Comments:

SIMPLE EQUIPMENT FAILURE WHICH DOES NOT LEAD TO A RELEASE.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be '**Yes**'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If Question 2 was answered '**YES**' then Part B is **POSITIVE** POSITIVE ☐ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER E-13
HAZARD DESCRIPTION EQUIPMENT DAMAGE, FIRE SPRINKLER SYSTEM FREEZES

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE then the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES TH Hayes 1/9/95
ENGINEER/DATE

P. Kelly 1/4/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: E-14

HAZARD DESCRIPTION: LIQUID CONTAMINATION RELEASE, FIRE SPRINKLER SYSTEM IS ACTIVATED IN THE PROCESS VESSEL VENTILATION ROOM

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☒

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☒

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE

☒

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER F-14
HAZARD DESCRIPTION LIQUID CONTAMINATION RELEASE, FIRE SPRINKLER SYSTEM IS ACTIVATED IN THE PROCESS VESSEL VENTILATION ROOM

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

THG 1/9/95
ENGINEER/DATE

[Signature] 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: F-15

HAZARD DESCRIPTION: LIQUID CONTAMINATION RELEASE, FIRE SPRINKLER SYSTEM IS ACTIVATED IN THE BUILDING/PIT VENTILATION ROOM

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE** POSITIVE ☒ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER F-15
HAZARD DESCRIPTION LIQUID CONTAMINATION RELEASE, FIRE SPRINKLER SYSTEM IS ACTIVATED IN THE BUILDING/PIT VENTILATION ROOM

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

D. Results

NOTE: If both Parts B and C were POSITIVE then the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: E-16

HAZARD DESCRIPTION: NONE. EMERGENCY VENT ON DIESEL GENERATOR FUEL TANK FAILS

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☐

NO

☒

Comments:

THE HAZARDS ARE FIRE AND EXPOSURE TO DIESEL FUEL AND THE BYPRODUCTS OF ITS COMBUSTION. ALL OF THESE ARE STANDARD INDUSTRIAL HAZARDS

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE**

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER F-16
HAZARD DESCRIPTION NONE. EMERGENCY VENT ON DIESEL GENERATOR FUEL TANK FAILS

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

ENGINEER/DATE

THG 1/9/95

TECHNICAL REVIEWER/DATE

[Signature] 1/9/95

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: F-17
HAZARD DESCRIPTION: NONE, MASTER PCM DISCONNECT SWITCH IS ACTIVATED INADVERTENTLY

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered **"NO"**, then do not continue with the rest of the evaluation. Mark Section D **"RESULTS"** as **"NEGATIVE"** and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If **"NO"** provide justification in the comments section.

YES

☐

NO

☒

Comments:

SIMPLE EQUIPMENT FAILURE WHICH DOES NOT LEAD TO A RELEASE.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as **"NO"**. References shall be provided in the 'comments' section for all **"NO"** responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If **Question 2** was answered **"YES"** then Part B is **POSITIVE**

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER E-17
HAZARD DESCRIPTION NONE. MASTER PCM DISCONNECT SWITCH IS ACTIVATED INADVERTENTLY

=====

C. CONSEQUENCE CRITERIA

- 3.) Can the event cause a fatality? YES ☐ NO ☐
- OR
- 4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐
- OR
- 5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐
- OR
- 6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐
- OR
- 7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐
- OR
- 8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE then the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

THGayer 1/9/95
ENGINEER/DATE

[Signature] 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: FW-1 a & b

HAZARD DESCRIPTION: INADVERTENT TRANSFER, LIQUID RELEASE, CONTAMINATED FLUSH WATER
SENT TO ETF FROM FLUSHWATER TANK OVERFLOW

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE** POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER FW-1 a & b
HAZARD DESCRIPTION INADVERTENT TRANSFER, LIQUID RELEASE, CONTAMINATED FLUSH WATER
SENT TO ETF FROM FLUSHWATER TANK OVERFLOW

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☒ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

THOMAS G. HAYES

ENGINEER/DATE

TH Hayes 1/9/95

TECHNICAL REVIEWER/DATE

2/2/95 1/9/95

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: FW-2 a & b

HAZARD DESCRIPTION: LIQUID RADIOACTIVE RELEASE, FLUSHWATER TANK FAILS OR OVERFLOWS

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is POSITIVE

POSITIVE

NEGATIVE

☐

**PROCESS HAZARD REVIEW
SCREENING FORM**

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484 Rev. 1
HAZARD NUMBER FW-2 a & b
HAZARD DESCRIPTION LIQUID RADIOACTIVE RELEASE, FLUSHWATER TANK FAILS OR OVERFLOWS

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both **Parts B and C** were **POSITIVE** than the results are **POSITIVE**

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: FW-3
HAZARD DESCRIPTION: FLUSH WATER SYS LINE BREAK

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☐

NO

☒

Comments:

SIMPLE EQUIPMENT FAILURE WHICH DOES NOT LEAD TO A RELEASE.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER FW-3
HAZARD DESCRIPTION FLUSH WATER SYS LINE BREAK

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

THG 1/9/95
ENGINEER/DATE

1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: FW-4
HAZARD DESCRIPTION: EQUIPMENT DAMAGE, FLUSHWATER PUMP IS DEADHEADED

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☐

NO

☒

Comments:

SIMPLE EQUIPMENT FAILURE WHICH DOES NOT LEAD TO A RELEASE.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER FW-4
HAZARD DESCRIPTION EQUIPMENT DAMAGE, FLUSHWATER PUMP IS DEADHEADED

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality?

YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem?

YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem?

YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3?

YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2?

YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality?

YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

THG Hayes 1/9/95
ENGINEER/DATE

PHZ 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: FW-5

HAZARD DESCRIPTION: LIQUID RELEASE OF RADIOACTIVITY, FLUSHWATER PUMP FAILS

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is **POSITIVE**

POSITIVE

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER FW-5
HAZARD DESCRIPTION LIQUID RELEASE OF RADIOACTIVITY, FLUSHWATER PUMP FAILS

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

D. Results

NOTE: If both Parts B and C were POSITIVE then the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

ENGINEER/DATE

THG 1/9/95

TECHNICAL REVIEWER/DATE

242 KLB 1/9/95

**PROCESS HAZARD REVIEW
SCREENING FORM**

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: FW-6
HAZARD DESCRIPTION: EQUIPMENT DAMAGE, HEAT TRACING IS LOST ON FLUSHWATER LINES

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☐

NO

☒

Comments:

SIMPLE EQUIPMENT FAILURE WHICH DOES NOT LEAD TO A RELEASE.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE** POSITIVE ☐ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER FW-6
HAZARD DESCRIPTION EQUIPMENT DAMAGE, HEAT TRACING IS LOST ON FLUSHWATER LINES

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality?

YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem?

YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem?

YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3?

YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2?

YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality?

YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

TH Hayes 1/9/95
ENGINEER/DATE

P2 KB 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: FW-7

HAZARD DESCRIPTION: DELETED

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☐ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE**

POSITIVE ☐ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER FW-7
HAZARD DESCRIPTION DELETED

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were **POSITIVE** than the results are **POSITIVE**

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

ENGINEER/DATE

THGayer 1/9/95

TECHNICAL REVIEWER/DATE

3263 1/9/95

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: FW-8

HAZARD DESCRIPTION: DELETED

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☐

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE**

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER FW-8
HAZARD DESCRIPTION DELETED

=====

C. CONSEQUENCE CRITERIA

- 3.) Can the event cause a fatality? YES ☐ NO ☐
- OR
- 4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐
- OR
- 5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐
- OR
- 6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐
- OR
- 7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐
- OR
- 8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

THG Hayes 1/9/95
ENGINEER/DATE

[Signature] 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: FW-9

HAZARD DESCRIPTION: NONE, BACTERIA ACCUMULATES IN FLUSHWATER TANK

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☐ NO ☒

Comments:

SIMPLE EQUIPMENT FAILURE WHICH DOES NOT LEAD TO A RELEASE.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE**

POSITIVE ☐ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER FW-9
HAZARD DESCRIPTION NONE. BACTERIA ACCUMULATES IN FLUSHWATER TANK

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

THG 1/9/95
ENGINEER/DATE

[Signature] 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: FW-10

HAZARD DESCRIPTION: NONE, WATER HAMMER OCCURS IN FLUSH WATER SYSTEM

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "RESULTS" as "NEGATIVE" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "NO" provide justification in the comments section.

YES

☐

NO

☒

Comments:

SIMPLE EQUIPMENT FAILURE WHICH DOES NOT LEAD TO A RELEASE.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER FW-10
HAZARD DESCRIPTION NONE. WATER HAMMER OCCURS IN FLUSH WATER SYSTEM

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G Hayes 28 Hayes 1/9/95
ENGINEER/DATE

[Signature] 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: FW-11

HAZARD DESCRIPTION: NONE, LOSS ON INSTRUMENT AIR TO VALVE HCR-7137, CAUSES SYSTEM TO BECOME CONTAMINATED

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☐ NO ☒

Comments:

VALVE FAILURE RESULTS IN SYSTEM CONTAMINATION BUT NO RELEASE OF MATERIAL.
EQUIPMENT FAILURE IS A STANDARD INDUSTRIAL HAZARD.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE** POSITIVE ☐ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER FW-11
HAZARD DESCRIPTION NONE, LOSS ON INSTRUMENT AIR TO VALVE HCR-7137, CAUSES SYSTEM TO BECOME CONTAMINATED

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

THG 1/9/95
ENGINEER/DATE

[Signature] 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: CR-1

HAZARD DESCRIPTION: LOSS OF PRODUCTION, CRANE STOPS, CAUSING CONTAMINATION IN BUILDING

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

CONTAMINATION IN THE BUILDING IS A NON STANDARD TYPE EVENT. ALTHOUGH THE DESCRIPTION DOES NOT SPECIFICALLY INVOLVE EXPOSURE TO INDIVIDUALS THIS WAS CARRIED FORWARD AS A NON STANDARD INDUSTRIAL HAZARD.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE** POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CR-1
HAZARD DESCRIPTION LOSS OF PRODUCTION, CRANE STOPS, CAUSING CONTAMINATION IN BUILDING

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE then the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES THG Haynes 1/9/95
ENGINEER/DATE

1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: CR-2

HAZARD DESCRIPTION: LOSS OF PRODUCTION, CRANE RETRIEVAL SYSTEM FAILS

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☐ NO ☒

Comments:

SIMPLE EQUIPMENT FAILURE WHICH DOES NOT LEAD TO A RELEASE.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE** POSITIVE ☐ **NEGATIVE** ☐

**PROCESS HAZARD REVIEW
SCREENING FORM**

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CR-2
HAZARD DESCRIPTION LOSS OF PRODUCTION, CRANE RETRIEVAL SYSTEM FAILS

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

THG Hayes 1/9/95
ENGINEER/DATE

B2/KG 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: CR-3

HAZARD DESCRIPTION: PERSONNEL INJURY, EQUIPMENT DAMAGE, CRANE CABLE BREAKS DROPPING LOAD

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☐

NO

☒

Comments:

ALTHOUGH FATALITY IS IDENTIFIED, IT RESULTS FROM STANDARD INDUSTRIAL HAZARD OF A CRANE DROPPING ITS LOAD.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE**

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev. 1

HAZARD NUMBER CR-3

HAZARD DESCRIPTION PERSONNEL INJURY, EQUIPMENT DAMAGE, CRANE CABLE BREAKS DROPPING LOAD

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

TD Hayer 1/9/95
ENGINEER/DATE

Dr 266 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: CR-4

HAZARD DESCRIPTION: NONE, CRANE IS CONTAMINATED

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "RESULTS" as "NEGATIVE" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is POSITIVE POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CR-4
HAZARD DESCRIPTION NONE, CRANE IS CONTAMINATED

=====

C. CONSEQUENCE CRITERIA

- 3.) Can the event cause a fatality? YES ☐ NO ☒
- OR
- 4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒
- OR
- 5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒
- OR
- 6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒
- OR
- 7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒
- OR
- 8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

THG Hayes 1/9/95
ENGINEER/DATE

PH 2 Kelly 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: CR-5

HAZARD DESCRIPTION: EQUIPMENT DAMAGE, CRANE LIMIT SWITCHES FAIL

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☐

NO

☒

Comments:

SIMPLE EQUIPMENT FAILURE WHICH DOES NOT LEAD TO A RELEASE.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE**

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CR-5
HAZARD DESCRIPTION EQUIPMENT DAMAGE, CRANE LIMIT SWITCHES FAIL

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were **POSITIVE** than the results are **POSITIVE**

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES THG 1/9/95
ENGINEER/DATE

1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: CR-6

HAZARD DESCRIPTION: EQUIPMENT DAMAGE, CRANE IMPACTS BUILDING

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

ONE POSTULATED CONSEQUENCE IS DAMAGE TO THE CONTAMINATION CONTROL BARRIER. CARRIED FORWARD AS NOT A STANDARD INDUSTRIAL HAZARD FOR THIS REASON.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CR-6
HAZARD DESCRIPTION EQUIPMENT DAMAGE, CRANE IMPACTS BUILDING

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE then the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES TH Hayes 1/9/95
ENGINEER/DATE

PHZ Kelly 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484 Rev. 1

HAZARD NUMBER: CR-7

HAZARD DESCRIPTION: EQUIPMENT DAMAGE, MAINTENANCE PLATFORM IS DAMAGED

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☐

NO

☒

Comments:

SIMPLE EQUIPMENT FAILURE WHICH DOES NOT LEAD TO A RELEASE.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES

☐

NO

☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is POSITIVE

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CR-7
HAZARD DESCRIPTION EQUIPMENT DAMAGE. MAINTENANCE PLATFORM IS DAMAGED

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES THG 1/9/95
ENGINEER/DATE

1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484 Rev. 1

HAZARD NUMBER: CR-8

HAZARD DESCRIPTION: LOSS OF PRODUCTION, CAMERAS FAIL

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☐ NO ☒

Comments:

EQUIPMENT FAILURE WITHOUT THE RELEASE OF MATERIAL IS A STANDARD INDUSTRIAL HAZARD.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards. Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE ☐ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CR-8
HAZARD DESCRIPTION LOSS OF PRODUCTION, CAMERAS FAIL

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE then the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

TH Hayes 1/9/95
ENGINEER/DATE

John Ziegler
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: CR-9

HAZARD DESCRIPTION: LOSS OF PRODUCTION, CRANE CONTROLS IN CCR FAIL

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard OR can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☐ NO ☒

Comments:

SIMPLE EQUIPMENT FAILURE WHICH DOES NOT LEAD TO A RELEASE.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE** POSITIVE ☐ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CR-9
HAZARD DESCRIPTION LOSS OF PRODUCTION CRANE CONTROLS IN CCR FAIL

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

TH Hayes 1/7/95
ENGINEER/DATE

[Signature]
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: CR-10

HAZARD DESCRIPTION: LOSS OF PRODUCTION, IMPACT WRENCH FAILS

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☐

NO

☒

Comments:

SIMPLE EQUIPMENT FAILURE WHICH DOES NOT LEAD TO A RELEASE.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE**

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER CR-10
HAZARD DESCRIPTION LOSS OF PRODUCTION, IMPACT WRENCH FAILS

=====

C. CONSEQUENCE CRITERIA

- 3.) Can the event cause a fatality? YES ☐ NO ☐
- OR
- 4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐
- OR
- 5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐
- OR
- 6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐
- OR
- 7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐
- OR
- 8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

THG Haynes 1/9/95
ENGINEER/DATE

PS 2664 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: CR-11

HAZARD DESCRIPTION: EQUIPMENT DAMAGE, LOSS OF PRODUCTION, CRANE OPERATORS VISIBILITY IS LIMITED OR RESTRICTED

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☐ NO ☒

Comments:

SIMPLE EQUIPMENT FAILURE WHICH DOES NOT LEAD TO A RELEASE.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE** POSITIVE ☐ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev. 1

HAZARD NUMBER CR-11

HAZARD DESCRIPTION EQUIPMENT DAMAGE, LOSS OF PRODUCTION, CRANE OPERATORS VISIBILITY IS LIMITED OR RESTRICTED

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

TD Hayes 1/9/95
ENGINEER/DATE

for Kelly 1/9/95
TECHNICAL REVIEWER/DATE

**PROCESS HAZARD REVIEW
SCREENING FORM**

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: TL-1

HAZARD DESCRIPTION: LIQUID RELEASE OR RADIOACTIVITY, F/H INTER-AREA LINE IS OVERPRESSURIZED

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do *not* continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE** POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER TL-1
HAZARD DESCRIPTION LIQUID RELEASE OR RADIOACTIVITY, F/H INTER-AREA LINE IS OVERPRESSURIZED

=====

C. CONSEQUENCE CRITERIA

- 3.) Can the event cause a fatality? YES ☐ NO ☒
- OR
- 4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐
- OR
- 5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐
- OR
- 6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒
- OR
- 7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒
- OR
- 8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

THOMAS G. HAYES

THG Hayes 1/9/95
ENGINEER/DATE

1/2/95 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: TL-2

HAZARD DESCRIPTION: ADVERSE REACTION, EQUIPMENT DAMAGE, RADIOACTIVITY RELEASE,
INCOMPATIBLE WASTE ARE MIXED, ADVERSE REACTION

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev. 1

HAZARD NUMBER TL-2

HAZARD DESCRIPTION ADVERSE REACTION, EQUIPMENT DAMAGE, RADIOACTIVITY RELEASE,
INCOMPATIBLE WASTE ARE MIXED, ADVERSE REACTION

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

THG Haynes 1/9/95
ENGINEER/DATE

[Signature] 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484 Rev. 1
HAZARD NUMBER: TL-3
HAZARD DESCRIPTION: LIQUID RELEASE OF RADIOACTIVITY, TRANSFER LINE FAILS

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is **POSITIVE**

POSITIVE

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER TL-3
HAZARD DESCRIPTION LIQUID RELEASE OF RADIOACTIVITY, TRANSFER LINE FAILS

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

THOMAS G. HAYES

THG Hayes 1/9/95
ENGINEER/DATE

[Signature] 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: TL-4

HAZARD DESCRIPTION: DELETED

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☒

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☒

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE

☒

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER TL-4
HAZARD DESCRIPTION DELETED

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES THG 1/9/95
ENGINEER/DATE

PSZ/KB 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: TL-5
HAZARD DESCRIPTION: EQUIPMENT DAMAGE, EMBEDDED LINE IS PLUGGED

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☐ NO ☒

Comments:

SIMPLE EQUIPMENT FAILURE WHICH DOES NOT LEAD TO A RELEASE.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then **Part B** is **POSITIVE**

POSITIVE ☐ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER TL-5
HAZARD DESCRIPTION EQUIPMENT DAMAGE. EMBEDDED LINE IS PLUGGED

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

THG 1/9/95
ENGINEER/DATE

WJL 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: TL-6

HAZARD DESCRIPTION: LIQUID RELEASE OF RADIOACTIVITY, PUMP TANK OVERFLOWS FROM SIPHON

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then *do not* continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard OR can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE** POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER TL-6
HAZARD DESCRIPTION LIQUID RELEASE OF RADIOACTIVITY, PUMP TANK OVERFLOWS FROM SIPHON

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

THOMAS G. HAYES THG Hayes 1/9/95
ENGINEER/DATE

Stacy Kelly 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484 Rev. 1

HAZARD NUMBER: TL-7

HAZARD DESCRIPTION: LIQUID RELEASE OF RADIOACTIVITY, CATHODIC PROTECTION CAUSES FAILURE ON NON PROTECTED LINES

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then *do not* continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is POSITIVE POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev. 1

HAZARD NUMBER TL-7

HAZARD DESCRIPTION LIQUID RELEASE OF RADIOACTIVITY, CATHODIC PROTECTION CAUSES FAILURE ON NON PROTECTED LINES

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: TL-8

HAZARD DESCRIPTION: LIQUID RELEASE OF RADIOACTIVITY, WATER HAMMER OCCURS

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

NO

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

Comments:

NOTE: If Question 2 was answered '**YES**' then Part B is **POSITIVE**

POSITIVE

NEGATIVE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER TL-8
HAZARD DESCRIPTION LIQUID RELEASE OF RADIOACTIVITY, WATER HAMMER OCCURS

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE then the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

THOMAS G. HAYES

TH Hayes 2 1/9/95
ENGINEER/DATE

J. H. King 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: TL-9

HAZARD DESCRIPTION: DELETED

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☐ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER TL-9
HAZARD DESCRIPTION DELETED

C. CONSEQUENCE CRITERIA

- 3.) Can the event cause a fatality? YES ☐ NO ☐
- OR
- 4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐
- OR
- 5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐
- OR
- 6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐
- OR
- 7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐
- OR
- 8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

D. Results

NOTE: If both Parts B and C were POSITIVE then the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: TL-10

HAZARD DESCRIPTION: LIQUID RELEASE OF RADIOACTIVITY, THE F/H INTER-AREA LINE HIGH POINT PIT OVERFLOWS

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be '**Yes**'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE** POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER TL-10
HAZARD DESCRIPTION LIQUID RELEASE OF RADIOACTIVITY, THE F/H INTER-AREA LINE HIGH POINT PIT OVERFLOWS

C. CONSEQUENCE CRITERIA

- 3.) Can the event cause a fatality? YES ☐ NO ☒
- OR
- 4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐
- OR
- 5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐
- OR
- 6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒
- OR
- 7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒
- OR
- 8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

D. Results

NOTE: If both Parts B and C were POSITIVE then the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

THOMAS G. HAYES 20 Hayes 1/9/95
ENGINEER/DATE

[Signature] 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: TL-11

HAZARD DESCRIPTION: PERSONNEL EXPOSURE, MISVALVING ON TRANSFER

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☐ NO ☐

Comments:

SEE CBD-27

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

SEE CBD-27

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE**

POSITIVE ☐ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER TL-11
HAZARD DESCRIPTION PERSONNEL EXPOSURE, MISVALVING ON TRANSFER

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

SEE CDB-27

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES THG 1/9/95
ENGINEER/DATE

[Signature] 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: TL-12 a & b

HAZARD DESCRIPTION: LIQUID RELEASE OF RADIOACTIVITY, INTERAREA LINE SIGNALS FAIL DURING TRANSFER

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "RESULTS" as "NEGATIVE" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard OR can this event cause the release of radioactive material or hazardous chemicals? If "NO" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484 Rev. 1

HAZARD NUMBER TL-12 a & b

HAZARD DESCRIPTION LIQUID RELEASE OF RADIOACTIVITY, INTERAREA LINE SIGNALS FAIL DURING TRANSFER

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

THG 1/9/95
ENGINEER/DATE

JS2/KG 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: BCR-01

HAZARD DESCRIPTION: PERSONNEL, INJURY, FATALITY FROM HYDROGEN GAS GENERATED FROM LEAD ACID BATTERIES

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☐

NO

☒

Comments:

LEAD ACID BATTERIES AND THE ASSOCIATED HYDROGEN GENERATION ARE STANDARD INDUSTRIAL HAZARDS.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE**

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER BCR-01
HAZARD DESCRIPTION PERSONNEL, INJURY, FATALITY FROM HYDROGEN GAS GENERATED FROM LEAD ACID BATTERIES

=====

C. CONSEQUENCE CRITERIA

- 3.) Can the event cause a fatality? YES ☐ NO ☐
- OR
- 4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐
- OR
- 5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐
- OR
- 6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐
- OR
- 7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐
- OR
- 8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

TH Hayes 1/9/95
ENGINEER/DATE

12.6.95 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

Facility: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: BCR-02

HAZARD DESCRIPTION: PERSONNEL INJURY, FATALITY FROM FAILURE OF EXHAUST FAN IN BATTERY ROOM

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then *do not* continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☐ NO ☒

Comments:

HYDROGEN GENERATION FROM LEAD ACID BATTERIES IS A STANDARD INDUSTRIAL HAZARD.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE ☐ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER BCR-02
HAZARD DESCRIPTION PERSONNEL INJURY, FATALITY FROM FAILURE OF EXHAUST FAN IN BATTERY ROOM

=====

C. CONSEQUENCE CRITERIA

- 3.) Can the event cause a fatality? YES ☐ NO ☐
- OR
- 4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐
- OR
- 5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐
- OR
- 6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐
- OR
- 7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐
- OR
- 8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

THG 1/9/95
ENGINEER/DATE

[Signature] 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: BCR-03

HAZARD DESCRIPTION: CHEMICAL RELEASE, RUPTURED BATTERY CASE

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☐ NO ☒

Comments:

LEAD ACID BATTERIES ARE STANDARD INDUSTRIAL HAZARDS.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is **POSITIVE** POSITIVE ☐ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER BCR-03
HAZARD DESCRIPTION CHEMICAL RELEASE, RUPTURED BATTERY CASE

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

THG 1/9/95
ENGINEER/DATE

[Signature] 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: BCR-04

HAZARD DESCRIPTION: AIRBORNE CONTAMINATION RELEASE, HP VACUUM HEADER BECOMES
CONTAMINATED AND DISCHARGE PIPE LEAKS

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE** POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER BCR-04
HAZARD DESCRIPTION AIRBORNE CONTAMINATION RELEASE, HP VACUUM HEADER BECOMES
CONTAMINATED AND DISCHARGE PIPE LEAKS

=====

C. CONSEQUENCE CRITERIA

- 3.) Can the event cause a fatality? YES ☐ NO ☒
- OR
- 4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒
- OR
- 5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒
- OR
- 6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒
- OR
- 7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒
- OR
- 8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were **POSITIVE** then the results are **POSITIVE**

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES TH Hayes 1/9/95
ENGINEER/DATE

John Z Kelly 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: BCR-05

HAZARD DESCRIPTION: PERSONNEL AIRBORNE RELEASE OF RADIOACTIVITY, AIR REVERSAL OCCURS

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered **"NO"**, then do not continue with the rest of the evaluation. Mark Section D **"RESULTS"** as **"NEGATIVE"** and sign/date the form.

1.) If this Hazard different from a standard industrial hazard OR can this event cause the release of radioactive material or hazardous chemicals? If **"NO"** provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be **'Yes'**. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as **'NO'**. References shall be provided in the **'comments'** section for all **'NO'** responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered **'YES'** then Part B is **POSITIVE** POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER BCR-05
HAZARD DESCRIPTION PERSONNEL AIRBORNE RELEASE OF RADIOACTIVITY AIR REVERSAL OCCURS

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE then the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES THHayes 1/9/95
ENGINEER/DATE

[Signature] 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: BCR-06

HAZARD DESCRIPTION: RELEASE OF RADIOACTIVITY (AIRBORNE OR LIQUID), AIR CONDITIONING IS LOST

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard OR can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

NO

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

NO

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is **POSITIVE**

POSITIVE

NEGATIVE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER BCR-06
HAZARD DESCRIPTION RELEASE OF RADIOACTIVITY (AIRBORNE OR LIQUID), AIR CONDITIONING IS LOST

=====

C. CONSEQUENCE CRITERIA

- 3.) Can the event cause a fatality? YES ☐ NO ☒
- OR
- 4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐
- OR
- 5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐
- OR
- 6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒
- OR
- 7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒
- OR
- 8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were **POSITIVE** than the results are **POSITIVE**

POSITIVE ☒ NEGATIVE ☐

THOMAS G. HAYES THG 1/9/95
ENGINEER/DATE

1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: BCR-07

HAZARD DESCRIPTION: EQUIPMENT DAMAGE, LIGHTNING STRIKES ECR/ICR

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☐

NO

☒

Comments:

SIMPLE EQUIPMENT FAILURE WHICH DOES NOT LEAD TO A RELEASE.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE**

POSITIVE ☐ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER BCR-07
HAZARD DESCRIPTION EQUIPMENT DAMAGE, LIGHTNING STRIKES ECR/ICR

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES THG Hayn 1/9/95
ENGINEER/DATE

PS2663 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: BCR-08

HAZARD DESCRIPTION: NONE, BACKUP AC UNIT FAILS

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If " **NO**" provide justification in the comments section.

YES ☐ NO ☒

Comments:

SIMPLE EQUIPMENT FAILURE WHICH DOES NOT LEAD TO A RELEASE.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE**

POSITIVE ☐ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER BCR-08
HAZARD DESCRIPTION NONE, BACKUP AC UNIT FAILS

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

THG 1/9/95
ENGINEER/DATE

DKL 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: BCR-09

HAZARD DESCRIPTION: PERSONNEL EXPOSURE, ACCESS TO 241-1-1H ROOF IS NOT CONTROLLED

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If Question 2 was answered '**YES**' then Part B is **POSITIVE** POSITIVE ☒ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER BCR-09
HAZARD DESCRIPTION PERSONNEL EXPOSURE, ACCESS TO 241-1-1H ROOF IS NOT CONTROLLED

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THE PHR IDENTIFIED NO CONSEQUENCE WHICH EXCEEDED ANY EXPOSURE CRITERIA.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

247 Hayes 1/9/95
ENGINEER/DATE

247 S. L. K. 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: BCR-10

HAZARD DESCRIPTION: PERSONNEL INJURY, PERSONNEL TRIP ON THE STEPOVER CURB

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☐

NO

☒

Comments:

TRIPS AND FALLS ARE STANDARD INDUSTRIAL HAZARDS.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE**

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER BCR-10
HAZARD DESCRIPTION PERSONNEL INJURY, PERSONNEL TRIP ON THE STEPOVER CURB

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE then the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

TH Hayes 1/9/95
ENGINEER/DATE

PH 2/Kelly 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: BCR-11

HAZARD DESCRIPTION: EQUIPMENT DAMAGE, DOMESTIC WATER SUPPLY TO THE HUMIDIFIER OVERFLOWS

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☐

NO

☒

Comments:

SIMPLE EQUIPMENT FAILURE WHICH DOES NOT LEAD TO A RELEASE.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☐

NO

☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE

☐

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER BCR-11
HAZARD DESCRIPTION EQUIPMENT DAMAGE, DOMESTIC WATER SUPPLY TO THE HUMIDIFIER
OVERFLOWS

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES 20 Haynes 1/9/98
ENGINEER/DATE

20 Kelly 1/9/98
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: BCR-12

HAZARD DESCRIPTION: AIRBORNE OR LIQUID RELEASE, THE MAIN AC UNIT NORMAL POWER IS LOST

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE** POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER BCR-12
HAZARD DESCRIPTION AIRBORNE OR LIQUID RELEASE. THE MAIN AC UNIT NORMAL POWER IS LOST

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES THG 1/9/95
ENGINEER/DATE

1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: BCR-13

HAZARD DESCRIPTION: EQUIPMENT DAMAGE, PERSONNEL INJURY, CABLES ARE IMPROPERLY
TERMINATED AS RESULT OF MODIFICATIONS

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☐ NO ☒

Comments:

SIMPLE EQUIPMENT FAILURE WHICH DOES NOT LEAD TO A RELEASE.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE**

POSITIVE ☐ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER BCR-13
HAZARD DESCRIPTION EQUIPMENT DAMAGE, PERSONNEL INJURY, CABLES ARE IMPROPERLY
TERMINATED AS RESULT OF MODIFICATIONS

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

TH Hayes 1/9/95
ENGINEER/DATE

John Kelly 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: BCR-14

HAZARD DESCRIPTION: EQUIPMENT DAMAGE, INSTRUMENT AIR RECEIVER AUTO DRAIN VALVE FAILS TO OPEN

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The NOTES will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "NO", then do not continue with the rest of the evaluation. Mark Section D "RESULTS" as "NEGATIVE" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard OR can this event cause the release of radioactive material or hazardous chemicals? If "NO" provide justification in the comments section.

YES ☐ NO ☒

Comments:

SIMPLE EQUIPMENT FAILURE WHICH DOES NOT LEAD TO A RELEASE.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE POSITIVE ☐ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER BCR-14
HAZARD DESCRIPTION EQUIPMENT DAMAGE, INSTRUMENT AIR RECEIVER AUTO DRAIN VALVE FAILS TO OPEN

=====

C. CONSEQUENCE CRITERIA

- 3.) Can the event cause a fatality? YES ☐ NO ☐
- OR
- 4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐
- OR
- 5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐
- OR
- 6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐
- OR
- 7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐
- OR
- 8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were **POSITIVE** than the results are **POSITIVE**

POSITIVE ☐ NEGATIVE ☒

THOMAS G. HAYES

THG Haynes 1/9/95
ENGINEER/DATE

AK2 Kelly 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: DCS-1

HAZARD DESCRIPTION: Radioactive Release - Loss of DCS a) OCM, b) DCM, c) PCM, or d) datahighway

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence

The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "RESULTS" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard OR can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

E: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER DCS-1
HAZARD DESCRIPTION Radioactive Release - Loss of DCS a) OCM, b) DCM, c) PCM, or d) datahighway

C. CONSEQUENCE CRITERIA

- 3.) Can the event cause a fatality? YES ☐ NO ☒
- OR
- 4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒
- OR
- 5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒
- OR
- 6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒
- OR
- 7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒
- OR
- 8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

The loss of the computer system does not automatically result in a release. Operators are able to take manual actions to stop any operation, putting the facility in a safe condition.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

ENGINEER/DATE

John L. Kelly 1/9/95

TECHNICAL REVIEWER/DATE

John L. Kelly 1/9/95

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: DCS-2

HAZARD DESCRIPTION: Atmospheric or Liquid Release - DWPF system goes down partially or fully

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence

The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered **"NO"**, then do not continue with the rest of the evaluation. Mark Section D **"RESULTS"** as **"NEGATIVE"** and sign/date the form.

1.) If this Hazard different from a standard industrial hazard OR can this event cause the release of radioactive material or hazardous chemicals? If **"NO"** provide justification in the comments section.

YES

☒

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as **"NO"**. References shall be provided in the 'comments' section for all **"NO"** responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☒

NO

☐

Comments:

NOTE: If **Question 2** was answered **"YES"** then Part B is **POSITIVE**

POSITIVE

☒

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER DCS-2
HAZARD DESCRIPTION Atmospheric or Liquid Release - DWPF system goes down partially or fully

C. CONSEQUENCE CRITERIA

- 3.) Can the event cause a fatality? YES ☐ NO ☒
- OR
- 4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐
- OR
- 5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐
- OR
- 6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒
- OR
- 7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒
- OR
- 8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

A release is only expected to occur for a full loss of system.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

John L. Kelly

John L. Kelly 1/9/95
ENGINEER/DATE

John L. Kelly 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: DCS-3

HAZARD DESCRIPTION: None to NWTF - The NWTF DCS goes down

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☐ NO ☒

Comments:

No exposures are postulated by the PHR. Simple failure of equipment to function is a standard industrial hazard.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be "Yes". Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as "**NO**". References shall be provided in the '**comments**' section for all "**NO**" responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE** POSITIVE ☐ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER DCS-3
HAZARD DESCRIPTION None to NWTF - The NWTF DCS goes down

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

Thomas M. Hays 1/9/95

ENGINEER/DATE

Shirley 1/9/95

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: DCS-4

HAZARD DESCRIPTION: None - Water in access boxes

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☐ NO ☒

Comments:

The design of the system for the data highway protects against water intrusion. If water were to cause a problem item 1D should cover this event.

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE** POSITIVE ☐ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER DCS-4
HAZARD DESCRIPTION None - Water in access boxes

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

1/9/95
ENGINEER/DATE

1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: DCS-5

HAZARD DESCRIPTION: See item DCS-1` event (item d)

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☐ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is **POSITIVE**

POSITIVE ☐ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER DCS-5
HAZARD DESCRIPTION See item DCS-1` event (item d)

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE then the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

1/9/95
ENGINEER/DATE

247 Hays 1/9/95

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

Facility: New Waste Transfer Facility
DOCUMENT TITLE: PHR 200-H-484, Rev. 1
HAZARD NUMBER: DCS-6
HAZARD DESCRIPTION: None - The I/O shutdown switch fails.

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard OR can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☐ NO ☒

Comments:

System has redundant features

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to Question 2 should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark Question 2 as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☐ NO ☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE

POSITIVE ☐ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER DCS-6
HAZARD DESCRIPTION None - The I/O shutdown switch fails.

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☐

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☐

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☐

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☐

Comments:

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were **POSITIVE** than the results are **POSITIVE**

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

[Signature]
ENGINEER/DATE

[Signature]
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: SW-1

HAZARD DESCRIPTION: Liquid Release -Radioactive material reaches stormwater system from an NWTF building or system

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES

☒

NO

☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)?

YES

☒

NO

☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE**

POSITIVE

☒

NEGATIVE

☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev. 1

HAZARD NUMBER SW-1

HAZARD DESCRIPTION Liquid Release -Radioactive material reaches stormwater system from an NWTF building or system

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

For this event to occur an event already covered by another episode in the PHR would have needed to occur. This event involves releases to the Storm Water System which is external to NWTF. The Defense In Depth evaluation will be limited in its scope to identifying those MPF's and LOD's within NWTF that prevent or mitigate the releases.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

John L. Kelly

John L. Kelly 1/9/95
ENGINEER/DATE

DA Hoyer 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: SW-2

HAZARD DESCRIPTION: None - Conductivity probe fails in PVV room.

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as '**NO**'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE** POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER SW-2
HAZARD DESCRIPTION None - Conductivity probe fails in PVV room.

C. CONSEQUENCE CRITERIA

- 3.) Can the event cause a fatality? YES ☐ NO ☒
- OR
- 4.) Can the event cause a an On-site exposure of 5 rem? YES ☐ NO ☒
- OR
- 5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☐ NO ☒
- OR
- 6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒
- OR
- 7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒
- OR
- 8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

The PHR did not list any of the criteria for personnel exposure as being exceeded.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☐ NEGATIVE ☒

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☐ NEGATIVE ☒

John L. Kelly

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: EARTHQUAKE

HAZARD DESCRIPTION: AIRBORNE RELEASE, HYDROGEN EXPLOSION IN PUMP TANK FOLLOWING
DESIGN BASIS EARTHQUAKE

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all '**NO**' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered '**YES**' then Part B is **POSITIVE**

POSITIVE ☒ **NEGATIVE** ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev. 1

HAZARD NUMBER EARTHQUAKE

HAZARD DESCRIPTION AIRBORNE RELEASE, HYDROGEN EXPLOSION IN PUMP TANK FOLLOWING
DESIGN BASIS EARTHQUAKE

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

ANY FATALITIES ASSOCIATED WITH THIS EVENT WILL BE FROM HAZARDS ASSOCIATED WITH BUILDING DAMAGE. THESE ARE CONSIDERED STANDARD INDUSTRIAL HAZARDS. THIS EVENT WAS NOT EVALUATED IN THE PHR. IT IS ADDED BECAUSE IT IS A STANDARD ACCIDENT IN ALL SAR'S. THE POSTULATED CONSEQUENCES ARE ASSUMED TO BE SIMILAR TO THOSE OF HAZARD HV-1.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

THOMAS G. HAYES

THGayer 1/9/95
ENGINEER/DATE

1/92 KJ 1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

ACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: WIND

HAZARD DESCRIPTION: AIRBORNE RELEASE, LOSS OF VENTILATION, HYDROGEN EXPLOSION,
FOLLOWING HIGH STRAIGHT WIND AND/OR DESIGN BASIS TORNADO

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then *do not* continue with the rest of the evaluation. Mark Section D "**RESULTS**" as "**NEGATIVE**" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the '**comments**' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If **Question 2** was answered 'YES' then Part B is **POSITIVE** POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER WIND
HAZARD DESCRIPTION AIRBORNE RELEASE, LOSS OF VENTILATION, HYDROGEN EXPLOSION,
FOLLOWING HIGH STRAIGHT WIND AND/OR DESIGN BASIS TORNADO

=====

C. CONSEQUENCE CRITERIA

3.) Can the event cause a fatality? YES ☐ NO ☒

OR

4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐

OR

5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐

OR

6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒

OR

7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒

OR

8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

THIS EVENT WAS NOT EVALUATED IN THE PHR. IT IS ADDED BECAUSE IT IS A STANDARD ACCIDENT IN ALL SAR'S. THE POSTULATED CONSEQUENCES ARE ASSUMED TO BE SIMILAR TO THOSE OF HAZARD HV-1.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

=====

D. Results

NOTE: If both Parts B and C were POSITIVE than the results are POSITIVE

POSITIVE ☒ NEGATIVE ☐

THOMAS G. HAYES

TH Hayes 1/9/95
ENGINEER/DATE

1/9/95
TECHNICAL REVIEWER/DATE

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE: PHR 200-H-484, Rev. 1

HAZARD NUMBER: Loss of Normal Power

HAZARD DESCRIPTION: Loss of Normal Power (to NWTF) leads to hydrogen explosion due to loss of ventilation

=====

GENERAL INSTRUCTIONS:

Perform the form in Sequence
The **NOTES** will provide additional information on the disposition of specific items

=====

A. GENERAL SCREENING CRITERIA

NOTE: If the following question can be answered "**NO**", then do not continue with the rest of the evaluation. Mark Section D "RESULTS" as "NEGATIVE" and sign/date the form.

1.) If this Hazard different from a standard industrial hazard **OR** can this event cause the release of radioactive material or hazardous chemicals? If "**NO**" provide justification in the comments section.

YES ☒ NO ☐

Comments:

=====

B. FREQUENCY CRITERIA

NOTE: For all Process Hazards Reviews all events are considered 'credible' and the answer to **Question 2** should be 'Yes'. Only if the Engineer can show that the event is incredible (e.g., results of a fault tree analysis) should the Engineer mark **Question 2** as 'NO'. References shall be provided in the 'comments' section for all 'NO' responses.

2.) Is this hazard event credible (occurs more frequent than E-06 events/yr)? YES ☒ NO ☐

Comments:

NOTE: If Question 2 was answered 'YES' then Part B is POSITIVE POSITIVE ☒ NEGATIVE ☐

PROCESS HAZARD REVIEW
SCREENING FORM

WSRC-TR-95-0012
REV. 0

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev. 1
HAZARD NUMBER Loss of Normal Power
HAZARD DESCRIPTION Loss of Normal Power (to NWTF) leads to hydrogen explosion due to loss of ventilation

C. CONSEQUENCE CRITERIA

- 3.) Can the event cause a fatality? YES ☐ NO ☒
- OR
- 4.) Can the event cause a an On-site exposure of 5 rem? YES ☒ NO ☐
- OR
- 5.) Can the event cause a an Off-site radiation exposure of 0.5 rem? YES ☒ NO ☐
- OR
- 6.) Can the event cause an On-site exposure which exceeds ERPG-3? YES ☐ NO ☒
- OR
- 7.) Can the event cause an Off-site exposure which exceeds ERPG-2? YES ☐ NO ☒
- OR
- 8.) Can the event cause an uncontrolled nuclear criticality? YES ☐ NO ☒

Comments:

This event is not in the PHR. It is added here to provide a place to document some known Defense in Depth items that would otherwise have been overlooked. This event is postulated to cause offsite consequences even though the judgement of the analysts is that it will not.

NOTE: If any of the Questions below (3 thru 8) are "YES" then Part C is Positive.

POSITIVE ☒ NEGATIVE ☐

D. Results

NOTE: If both Parts B and C were **POSITIVE** than the results are **POSITIVE**

POSITIVE ☒ NEGATIVE ☐

THOMAS G. HAYES

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

APPENDIX B

MPFs and LODs

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New Waste Transfer Facility

PHR 200-H-484, Rev 1

CDB-01

Liquid Release - The primary transfer pump for a tank fails (during a continuous transfer).

HAZARD DESCRIPTION

ARD NUMBER

DOCUMENT TITLE

FACILITY:

Normal Operational MPFS

Indicators
Pump bearing temperatures, Pump vibration indicators, Pump Status Indicators, Tank level indicators
Alarms
Pump Vibration Alarm, Pump Bearing Temperature High Alarm, Tank Level Alarms
Interlocks
Tank High Level Interlocks (some transfers), Pump controlled on tank level during continuous transfers
Equipment
Tank, Jumpers, Transfer Piping
Procedural
Transfers procedures

Post Event MPFS

Indicators
Tank level indicators, Sump level, Adjacent Cell Indicators, Pump status indicators
Alarms
Tank Level Alarms, Sump Conductivity Probe, Adjacent cell alarms, stack cam alarm, high bay cam, high
Interlocks
day ARM
Tank High Level Interlock (some transfers), stack alarm-ventilation fan interlock
Equipment
isolation valves in some jumpers, Back-up transfer system available for each tank (operator must enter high bay area), transfer system available for each cell sump, operator may be able to take action to isolate line bringing in incoming fluid. (some cases), Cell volume allows large volume for containment, pipe chase and adjacent cells provide additional volume, cell design provides high degree of confinement, High Bay Ventilation system provides additional confinement for any airborne leaks from a cell.
Procedural
Emergency Procedures
Transfer Procedures

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER CDB-01

HAZARD DESCRIPTION Liquid Release - The primary transfer pump for a tank fails (during a continuous transfer)..

Lines of Defense _____

Barriers

1. Tank (Primary)
2. Cell/sump (Secondary)
3. Pipe Chase/Adjacent Cells
4. Curbing in High Bay Area

Preventers

1. Operator compliance to Transfer and material balance procedures
2. Operator Action and (Pump indications or alarms)
3. Operator Action and (Tank indications or alarms)
4. Tank High Level Interlock (some cases)

Mitigators

1. Operator Action and (Sump Level alarm or indicator)
2. Operator round sheets and subsequent action
3. Operator Action and (Adjacent Cell Alarms)
4. Operator Action and (Stack, cam or building activity/radiation alarms)
5. The tank, cell, and adjacent cell volumes act as mitigators in that they comprise such a large volume that it is practically incredible that their combined volume would be exceeded prior to the transfer being stopped.
6. Responses to Emergency procedures
7. Any airborne material contained by process vessel vent and building ventilation systems.

John Z Kelly 1/4/95
ENGINEER/DATE

Gene R. Bruschi 1-9-95
TECHNICAL REVIEWER/DATE

Wesley S Brown 1/18/95
FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

WARD NUMBER CDB-5

HAZARD DESCRIPTION Liquid Release - A tank leaks or fails. (No transfer in Progress)

.....

.....

=====

Normal Operational MPFS

Indicators
Tank level indicators

Alarms
Tank Level Alarms

Interlocks
Tank Low Level Interlocks

Equipment
Tank

Procedural
Operator Round Sheets

Post Event MPFs

Indicators
Tank level indicators, sump level indicator

Alarms
Tank Low Level Alarms, Sump Level Alarm (Conductivity Probe)

Interlocks
none

Equipment
Back-up transfer system available for each tank (operator must enter High Bay for jet transfers), transfer system available for each cell, Cell volume allows large volume for containment

Procedural
Emergency Procedures
Transfer Procedures

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER CDB-5

HAZARD DESCRIPTION Liquid Release - A tank leaks or fails... (No transfer in Progress)

Lines of Defense _____

Barriers

1. Tank (Primary)
2. Cell/sump (Secondary)

Preventers

1. Design of Tank (Stainless Steel) and correct operation (i.e., chemistry control and temperature limits on incoming material)

Mitigators

1. Cell volume will contain contents of full tank
2. Operator Action (i.e. jetting sump contents to tank and transferring tank contents to other tank) and response to alarm or abnormal reading from (tank or sump instruments) based on transfer procedure guidance
3. Buiding and process vessel vent systems contain any airborne material.
4. Responses to Emergency procedures

1/9/95
ENGINEER/DATE

Gene R. Brusch 1-9-95
TECHNICAL REVIEWER/DATE

1/18/95
FACILITY REVIEWER/DATE

New Waste Transfer Facility

PHR 200-H-484, Rev 1

CDB-7

Liquid Release - The level instrumentation in the sump fails (Loss of conductivity probe or bubbler and subsequent release to cell (CDB-1, CDB-5, CDB-12))

HAZARD DESCRIPTION

HAZARD NUMBER

DOCUMENT TITLE

FACILITY:

Normal Operational MPFS

Indicators

Sump Level (Loss of reading)

Alarms

Sump Level (conductivity probe)

Interlocks

None

Equipment

Sump transfer jet, Sump/Cell

Procedural

Operator Round Sheets

Transfer Procedure

Cell use restricted if instrumentation is not functioning

Sump conductivity probe has functional check performed once per shift

Post Event MPFS

Indicators

Tank level indicators, Sump Level (if conductivity probe assumed inoperable), adjacent cell indicators

Alarms

Tank Level Alarms, Sump Conductivity Probe (if bubbler assumed inoperable), pipe chase conductivity

Interlocks

stack alarm-ventilation fan interlock

Equipment

Isolation Valve in some jumpers, Transfer systems (jet or pump) available for each tank, transfer system

available for each cell sump, operator can take action to isolate lines bringing in incoming fluid (some

cases) Cell volume allows large volume for containment, pipe chase and adjacent cells provide

additional volume, High Bay Ventilation system provides additional confinement for any airborne

radioactivity leaks from a cell

Procedural

Emergency Procedures, Transfer Procedures

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev 1
HAZARD NUMBER CDB-7
HAZARD DESCRIPTION Liquid Release - The level instrumentation in the sump fails (Loss of conductivity probe or bubbler and subsequent release to cell (CDB-1, CDB-5, CDB-12)
Lines of Defense

Failure of sump level instrumentation would not result in a release, however the ability to detect a leak would be degraded if operations were allowed with a non-operative indicator.

Barriers

1. Cell/sump/underliner sump (Primary)
2. Pipe chase/adjacent cells/High Bay Curbing (Secondary)

Preventers

1. Operator response to round sheet required test of Conductivity Probe.
2. Design of Tank (Stainless Steel) and correct operation (i.e., chemistry control and temperature limits on incoming material)
3. Operator action in accordance with transfer procedures based on loss of indications or alarms
4. Periodic calibration of instruments

Mitigators

1. Cell volume will contain contents of full tank, additional volume available via pipe chase and adjacent cells
2. Operator Action and response to alarm or abnormal reading from (tank or sump instruments)
3. Operator action and response to pipe chase alarm or to adjacent cell indication or alarms.
4. Buiding and process vessel vent systems contain any airborne material.
5. Operator action and response to stack CAM, high bay CAM, or high bay ARM
6. Responses to Emergency procedures

Sh 2 Kelly 1/9/95
ENGINEER/DATE

Gene R. Brusch 1-9-95
TECHNICAL REVIEWER/DATE

Wesley S. Brown 1/18/95
FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

WARD NUMBER CDB-8

HAZARD DESCRIPTION Liquid release /Loss of production -The wiring or electrical connectors to a cell fail
(Leads to CDB-1, or CDB-7 or Shutdown)

=====

Normal Operational MPFS

Indicators

Loss of indicators/inability to operate affected equipment

Alarms

DCS (alarms if indications are lost)

Interlocks

None

Equipment

Tank, Jumpers, Transfer Pipes, Loss of power acts to isolate the cell from performing incoming or outgoing transfers. Valves designed to fail safe. Level instrumentation is redundant and/or has backups.

Procedural

Must restore power before performing transfers.

Testing performed when jumpers are changed out.

Post Event MPFS

Indicators

Loss of indicators/inability to operate affected equipment

Alarms

DCS (alarms if indications are lost)

Interlocks

See equipment)

Equipment

Tank and Cell provide large volume for containment, pipe chase and adjacent cells provide additional volume for containment, Loss of power acts to isolate the cell from performing incoming or outgoing transfers (some cases). Valves designed to fail safe. Level instrumentation is redundant and/or has backups.

Procedural

Must restore power before performing transfers.

Testing performed when jumpers are changed out.

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER CDB-8

HAZARD DESCRIPTION Liquid release /Loss of production -The wiring or electrical connectors to a cell fail
(Leads to CDB-1, or CDB-7 or Shutdown)

Lines of Defense _____

Barriers

1. Tank
2. Cell
3. Pipe Chase and Adjacent Cells

Preventers

1. Jumpers are installed and tested by procedure before resuming cell operations
2. Cables rated for radiation environment

Mitigators

1. The facility is designed to have redundant or backup indications/alarms for critical items as well as multiple methods of performing transfers. There are also emergency procedures to guide the operator in the event of an abnormal occurrence.
2. Electrical wall nozzles can be removed and replaced remotely

The PHR refers this event back to CDB-1.

Additional components in the LOD table for CDB-1.

1/9/95
ENGINEER/DATE

1-9-95
TECHNICAL REVIEWER/DATE

1/18/95
FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

WARD NUMBER CDB-12

HAZARD DESCRIPTION Liquid Release/Loss of Production - A cell jumper fails (Transfer through jumper in progress)

=====

Normal Operational MPFS

Indicators

tank level indicators, sump level indicator

Alarms

Tank Level Alarms, Sump Level Alarm (Conductivity Probe)

Interlocks

None

Equipment

Transfer piping, tank, jumper

Procedural

Transfer procedures

Post Event MPFS

Indicators

Tank Level Indicators, Sump level indicator, adjacent cell indicators

Alarms

Sump Level (conductivity probe), Tank Level Alarms, pipe chase conductivity probe and adjacent cell alarms, stack cam, high bay cam, high bay ARM

Interlocks

stack alarm-ventilation fan interlock

Equipment

Isolation valves in some jumpers, Transfer system available for each cell (operator must enter high bay for jet operation), operator can take action to isolate line bringing in incoming fluid (some cases). Cell volume allows large volume for containment, pipe chase and adjacent cells provide additional volume, High Bay Ventilation system provides additional confinement for any airborne radioactivity leaks from a cell.

Procedural

Emergency Procedures

Transfer Procedures

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev 1
HAZARD NUMBER CDB-12
HAZARD DESCRIPTION Liquid Release/Loss of Production - A cell jumper fails (Transfer through jumper in progress)
Lines of Defense _____

Barriers

1. Tank. jumper, transfer pipe (primary)
2. CellPipe chase and adjacent cells (secondary)

Preventers

- 1 Design of jumper and formal testing procedure after installation.

Mitigators

1. Operator action in response to abnormal readings (Transfer procedure requires mass balances), alarms or operation from affected component(s) served by jumper (ie sump level/alarm, tank levels/alarms, etc). The cell volume allows an extensive amount of time for operator action for all events (from a small leak to a line rupture).
2. Buiding and process vessel vent systems contain any airborne material.

A leaking or failed jumper carrying fluid would be comparable to a tank failure. This event is covered by CDB-5. If the failure were to occur in a location such that it could not isolate the leak, the NWTF operator would need to contact the sending facility to have them stop the transfer.

"For failures of electrical jumpers see CDB-8."

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev 1
HAZARD NUMBER CDB-13
HAZARD DESCRIPTION Liquid Release - A Jumper Leaks
.....
.....
.....

=====

Normal Operational MPFS

See CDB-12 for this event

Post Event MPFs

See CDB-12

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER CDB-13

HAZARD DESCRIPTION Liquid Release - A jumper Leaks.....
.....
.....

Lines of Defense
.....

See CDB-12

ENGINEER/DATE

1-9-95
TECHNICAL REVIEWER/DATE

1/18/95
FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

ARD NUMBER CDB-14

HAZARD DESCRIPTION Liquid Release/Equipment Damage - Jumper not tightened correctly

.....

.....

=====

Normal Operational MPFS

See CDB-8 and 12

Post Event MPFs

See CDB-8 and 12

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER CDB-14

HAZARD DESCRIPTION Liquid Release/Equipment Damage - Jumper not tightened correctly.....
.....
.....

Lines of Defense
.....

See CDB-8 (Electrical)
See CDB-12 (Mechanical)

1/9/95
ENGINEER/DATE

1-9-95
TECHNICAL REVIEWER/DATE

1/13/95
FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER CDB-15

HAZARD DESCRIPTION Liquid Release - Automatic or manual valve in a jumper fails (Transfer in progress).....

.....

=====

Normal Operational MPFS

See CDB-1 or 12 (Valve failure will be considered equivalent to jumper failure or overflow of a tank, with the exception that the pump indicators and alarms are not applicable for this scenario)

Post Event MPFs

See CDB-1 or 12 (Valve failure will be considered equivalent to jumper failure or overflow of a tank, with the exception that the pump indicators and alarms are not applicable for this scenario)

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER CDB-15

HAZARD DESCRIPTION Liquid Release - Automatic or manual valve in a jumper fails (Transfer in progress)

Lines of Defense

See CDB-1 or 12 (Valve failure will be considered equivalent to jumper failure or overflow of a tank, with the exception that the pump indicators and alarms are not applicable for this scenario)

1/9/95
ENGINEER/DATE

Gene R. Brucchi 1-9-95
TECHNICAL REVIEWER/DATE

Wesley S. Brown 1/18/95
FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER CDB-17

HAZARD DESCRIPTION Liquid Release/Airborne Release/Equipment Damage - Instrument Air is Lost (Transfer in Progress, level indication lost, transfer continues)

=====

Normal Operational MPFS

Indicators

pressure ind (remote and local), equipment changes position, local indicators

Alarms

system low pressure alarm

Interlocks

None

Equipment

Tank, Jumpers, Transfer Piping, Air receiver tank allows interruption of air supply for 1/2 hour, Loss of instrument air will result in equipment going to its fail safe position (Gang valves to vent position, isolation valves closed)

Procedural

Transfer Procedures,

Post Event MPFs

Indicators

Tank Temperature, Tank level indicators

Alarms

Conductivity Alarms, Tank low level alarms

Interlocks

See Equipment

Equipment

Air receiver allows interruption of air supply for 1/2 hour. Loss of instrument air will result in equipment going to its fail safe position. Cell volume allows large volume for containment, pipe chase and adjacent cells provide additional volume, Cell covers and High Bay Ventilation system provides additional confinement for any airborne leaks from a cell.

Procedural

Transfer Procedures

Emergency Procedures

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER CDB-17

HAZARD DESCRIPTION Liquid Release/Airborne Release/Equipment Damage - Instrument Air is Lost (Transfer in Progress, level indication lost, transfer continues)

Lines of Defense _____

Barriers

1. Tank, jumpers, transfer pipe (Primary)
2. Cell/sump (Secondary)
3. Pipe Chase/adjacent cells
4. High Bay Curbing

Preventers

1. 30 minute supply in receiver
2. Operator Response to Low pressure alarm or indication (has 30 minutes to respond)
3. Transfer procedures require operator to call transferring facility and have transfer stopped.
4. Automatic valves in jumpers will go to the shut position

Mitigators

1. Tank and cell volumes provide containment for a long period
2. Conductivity alarm(s) and operator response
3. Responses to Emergency procedures

John Z. Kelly 1/9/95
ENGINEER/DATE

Gene R. Brunchi 1-9-95
TECHNICAL REVIEWER/DATE

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FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev 1
ARD NUMBER CDB-19
HAZARD DESCRIPTION Liquid Release - Air to jet is lost (plant air is lost causing vacuum in jet transfer piping)
.....
.....

=====

Normal Operational MPFS

Indicators

plant air gauge readings, gang valve position indicators

Alarms

plant air advisory

Interlocks

Pressure signal automatically cycles gang valve back to maintenance/normal position, transfer can not be started unless plant air is available.

Equipment

Gang valve piping

Procedural

Transfer procedure concerning jet transfers

Post Event MPFs

Indicators

Gang valve position indicators

Alarms

ARMs

Interlocks

Pressure switch automatically cycles gang valve back to maintenance position (vents to pump pit 10)

Equipment

gang valve piping, Design of gang valve system should limit a suckback to the gang valves, vent piping return is to pump pit 10. (waste contained in piping)

Procedural

Emergency Procedures

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER CDB-19

HAZARD DESCRIPTION Liquid Release - Air to jet is lost (plant air is lost causing vacuum in jet transfer piping).....

Lines of Defense

Barriers

1. Jet transfer piping
2. Curbing around floor areas under gang valves

Preventers

1. Pressure switch automatically cycles gang valve back to maintenance position
2. Operator restores plant air based on indication.
3. Jet transfer cannot start unless plant air is available at the start of the transfer

Mitigators.

1. Gang valve piping acts as containment for material during suckback.
2. Design of system will alert operator that a valve position error has occurred (Alarm that interlock has cycled valve, air blow for less than 5 minutes, valves cycle to vent from steam without operator action).
3. ARMs within 25 feet of gang valve piping. Upon sensing a high radiation level a red light will come on at the vestibule door.
4. Flush water available to remove material in piping.
5. Responses to Emergency procedures

ENGINEER/DATE

TECHNICAL REVIEWER/DATE

FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev 1
WARD NUMBER CDB-20
HAZARD DESCRIPTION Liquid Release - Steam to jet is lost

=====

Normal Operational MPFS

See CDB-19 (This accident has the additional protective feature of having plant air, which will do the air blowdown. The air blowdown occurs at the end of a transfer procedure and is the reason suckbacks do not occur. If steam is lost the gang valve will cycle through the air blow position before cycling to the vent position)

Post Event MPFs

See CDB-19 (This accident has the additional protective feature of having plant air, which will do the air blowdown. The air blowdown occurs at the end of a transfer procedure and is the reason suckbacks do not occur. If steam is lost the gang valve will cycle through the air blow position before cycling to the vent position)

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER CDB-20

HAZARD DESCRIPTION Liquid Release - Steam to jet is lost

Lines of Defense

See CDB-19 (This accident has the additional protective feature of having plant air, which will do the air blowdown. The air blowdown occurs at the end of a transfer procedure and is the reason suckbacks do not occur. If steam is lost the gang valve will cycle through the air blow position before cycling to the vent position) .

John Kelly 1/9/95
ENGINEER/DATE

Gene R. Brusch 1-9-95
TECHNICAL REVIEWER/DATE

Wesley S. Brown 1/18/95
FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

WARD NUMBER CDB-22

HAZARD DESCRIPTION Liquid Release/Airborne Release/Equipment Damage - The gang valve is mis-positioned. (Steam flow continues, Over-flow, pressurize or heat the receiving tank)

=====

Normal Operational MPFS

See CDB-01 and 5 for MPF's related to tank overflow except pump related items are NA for this event. Below are additional MPF's for the other two cases.

Indicators

Gang valve position indications on DCS (pressure and temperature)

Tank temperature (temperature)

Alarms

Tank temperature (temperature)

Interlocks

None

Equipment

Manual steam isolation valves (all three)

Open vent line (pressure)

Open flow path to ventilation system (pressure)

Procedures (all cases)

Gang valve procedures

Post Event MPFs

See CDB-01 and 5 for MPF's related to tank overflow except pump related items are NA for this event. Below are additional MPF's for the other two cases.

Indicators

Gang valve position indications on DCS (pressure and temperature)

Tank temperature (temperature)

Alarms

Tank temperature (temperature)

Interlocks

None

Equipment

Manual steam isolation valves (all three)

Open vent line (pressure)

Open flow path to ventilation system (pressure)

Procedures (all cases)

Gang valve procedures

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER CDB-22

HAZARD DESCRIPTION Liquid Release/Airborne Release/Equipment Damage - The gang valve is mis-positioned. (Steam flow continues, Over-flow, pressurize or heat the receiving tank)

Lines of Defense _____

Barriers

Tank (primary)

Cell, pipe chase and adjacent cells (secondary)

Preventors

Operator action to close manual steam isolation valves (all three cases)

Operator action to transfer contents out of receiving tank (overflow and overpressure)

Overflow line vents tank (Overpressure)

Mitigators

1. Operator action to close manual steam isolation valves (all three cases)

2. Operator action to transfer contents out of receiving tank (overflow)

3. Overflow line vents tank (Overpressure)

4. Responses to Emergency procedures

1/9/95
ENGINEER/DATE

1-9-95
TECHNICAL REVIEWER/DATE

1/18/95
FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, REV. 1

WARD NUMBER CDB-33

HAZARD DESCRIPTION Liquid Release - A pump or motor flies apart (A pump or motor flies apart with a breach of a tank or cell wall due to flying parts)

=====

Normal Operational MPFS

See CDB-1 and CDB-5 (a failure of the tank is from this event is comparable to CDB-1 or CDB-5 - the speed control settings on the variable frequency drive would be another MPF and LOD for this specific event . A failure of the cell wall from this event is not credible. A break in the cell liner will not result in exceeding any criteria, see CDB-16)

Post Event MPFs

See CDB-1 and CDB-5 (a failure of the tank is from this event is comparable to CDB-1 or CDB-5 - the speed control settings on the variable frequency drive would be another MPF and LOD for this specific event . A failure of the cell wall from this event is not credible. A break in the cell liner will not result in exceeding any criteria, see CDB-16)

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, REV. 1

HAZARD NUMBER CDB-33

HAZARD DESCRIPTION Liquid Release - A pump or motor flies apart (A pump or motor flies apart with a breach of a tank or cell wall due to flying parts)

Lines of Defense

See CDB-1 and CDB-5 (a failure of the tank is from this event is comparable to CDB-1 or CDB-5 - the speed control settings on the variable frequency drive would be another MPF and LOD for this specific event . A failure of the cell wall from this event is not credible. A break in the cell liner will not result in exceeding any criteria, see CDB-16)

Thomas D. Hayen 1/9/95
ENGINEER/DATE

Gene R. Smochi 1-9-95
TECHNICAL REVIEWER/DATE

Wesley S. Green 1/18/95
FACILITY REVIEWER/DATE

FACILITY:	New Waste Transfer Facility
DOCUMENT TITLE	PHR 200-H-484, Rev 1
ARD NUMBER	CDB-34
HAZARD DESCRIPTION	Liquid Release - A pump tank overflows

Normal Operational MPFS

See CDB-1 (The MPFs and lines of defense associated with this event are identical to CDB-1 with the exception that the primary pump may be available as a post event MPF for this event and the pump indicators and alarms would only be applicable if it was the loss of the pump causing the event.)

Post Event MPFs

See CDB-1 (The MPFs and lines of defense associated with this event are identical to CDB-1 with the exception that the primary pump may be available as a post event MPF for this event and the pump indicators and alarms would only be applicable if it was the loss of the pump causing the event.)

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER CDB-34

HAZARD DESCRIPTION Liquid Release - A pump tank overflows

Lines of Defense _____

See CDB-1 (The MPFs and lines of defense associated with this event are identical to CDB-1 with the exception that the primary pump may be available as a post event MPF for this event and the pump indicators and alarms would only be applicable if it was the loss of the pump causing the event.)

John C. Kelly 1/9/95
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Gene R. Buschi 1-9-95
TECHNICAL REVIEWER/DATE

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FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

ARD NUMBER CDB-36

HAZARD DESCRIPTION Liquid Release - The cell overflows (Loss of indications to cell instrumentation followed by an overflow into the cell)

=====

Normal Operational MPFS

Indicators

Loss of DCS indication for cell

Alarms

DCS alarms concurrent with loss of power (or air) to instrumentation

Interlocks

Equipment designed to fail safe

Equipment

Cell, Tank, Jumpers, Transfer Piping

Procedural

Operator Round Sheets

Post Event MPFs

Indicators

Adjacent Cell Indicators,

Alarms

Adjacent cell alarms, stack cam alarm, high bay cam, high bay ARM

Interlocks

Tank High Level Interlock (some transfers), stack alarm-ventilation fan interlock

Equipment

Isolation valves in some jumpers, Cell volume allows large volume for containment, pipe chase and adjacent cells provide additional volume, cell design provides high degree of confinement, Cell covers and High Bay Ventilation system provides additional confinement for any airborne leaks from a cell.

Procedural

Emergency Procedures

Transfer Procedures

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER CDB-36

HAZARD DESCRIPTION Liquid Release - The cell overflows (Loss of indications to cell instrumentation followed by an overflow into the cell)

Lines of Defense

Barriers

1. Cell/sump (Primary)
2. Pipe Chase/Adjacent Cells (Secondary)
3. Curbing in High Bay Area (some areas)

Preventers

1. Tank High Level Interlock (some cases)
2. Operator response to loss of cell indications

Mitigators

1. Operator round sheets and subsequent action
2. Operator Action and (Adjacent Cell Alarms)
3. Operator Action and (Stack, cam or building activity/radiation alarms)
4. The tank, cell, and adjacent cell volumes act as mitigators in that they comprise such a large volume that it is practically incredible that there combined volume would be exceeded prior to the transfer being stopped.
5. Responses to Emergency procedures

1/9/95
ENGINEER/DATE

1-9-95
TECHNICAL REVIEWER/DATE

1/18/95
FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

ARD NUMBER CDB-47

HAZARD DESCRIPTION Airborne Release - Lube oil tank catches on fire (Smoke particles cause pluggage of
HEPA filter.)

=====

Normal Operational MPFS

Indicators

PVV system dp indicators, agitator power level, stack cam readings

Alarms

None

Interlocks

None

Equipment

Limited amount of oil to burn. All components in the cell subject to direct impingement of flame are non-combustible. Ignition sources not readily available. PVV ventilation system has redundant fan and HEPA

Procedural

Operator round sheets

Post Event MPFs

Indicators

PVV system dp indicators, stack cam readings

Alarms

Agitator High Power Advisory

Interlocks

Stack cam-ventilation

Equipment

Limited amount of oil to burn. All components in the cell subject to direct impingement of flame are non-combustible. Ignition sources not readily available. PVV ventilation system has redundant fan and HEPA, Cell design minimizes leakage to High Bay. High Bay ventilation system captures any release to the High Bay

Procedural

Emergency Procedures

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER CDB-47

HAZARD DESCRIPTION Airborne Release - Lube oil tank catches on fire (Smoke particles cause pluggage of HEPA filter.)

Lines of Defense _____

Barriers

1. Ventilation system with HEPA (primary)
HEPA's are greater than 99% efficient.

Preventers

1. Administrative controls and cell design
2. lack of ignition sources

Mitigators

1. Cell Design and HEPA filtered ventilation
2. Redundant HEPA filter
3. Stack cam interlock
4. Lack of combustibles
5. Responses to Emergency procedures

1/9/95
ENGINEER/DATE

Gene R. Brusch 1-9-95
TECHNICAL REVIEWER/DATE

Walter S. Brown 1/18/95
FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev 1
WARD NUMBER HV-O1 a & b
HAZARD DESCRIPTION Airborne Contamination Release, Vessel Vent System fails or Building Ventilation System fails (Hydrogen buildup in tank and subsequent explosion)

=====

Normal Operational MPFS

Loss of building ventilation will not result in a buildup of hydrogen, therefore only the PVV ventilation system is examined

Indicators

Loss of ventilation indicated on DCS (Multiple indication)

Alarms

DCS will alarm (Primary alarm will be low pit/tank d/p)

Interlocks

Standby feature for redundant blower

Equipment

Redundant blower for PVV system, Hydrogen generation rate of current material entering the pump tanks unlikely to generate sufficient hydrogen to cause an explosion. Building ventilation system will filter release outside cells

Procedural

Operator Round Sheets

Post Event MPFs

Indicators

Loss of ventilation indicated on DCS (Multiple indication)

Alarms

DCS will alarm (Primary alarm will be low pit/tank d/p)

Interlocks

Standby feature for blower

Equipment

Redundant blower for PVV system, Hydrogen generation rate of current material entering the pump tanks unlikely to generate sufficient hydrogen to cause an explosion. Building ventilation system will filter release outside cells

Procedural

Emergency Procedures

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER HV-O1 a & b

HAZARD DESCRIPTION Airborne Contamination Release. Vessel Vent System fails or Building Ventilation System fails (Hydrogen buildup in tank and subsequent explosion)

Lines of Defense _____

Barriers

1. Tank (Primary)
2. Cell (Secondary)
3. High Bay Area

Preventers

1. Standby feature for PVV blowers
2. Loss of system indications/alarms and operator action
3. Lack of ignition sources
4. Tank contents gas generation rate and presence of continuous vent path unlikely to result in LFL being exceeded
5. Operator notices abnormal reading and responds appropriately.

Mitigators

1. Building ventilation or PVV system will filter release
2. Responses to Emergency procedures

John Z Kelly 1/9/95
ENGINEER/DATE

Gene R. Brusch 1-9-95
TECHNICAL REVIEWER/DATE

Wesley S Brown 1/18/95
FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

WARD NUMBER F-3

HAZARD DESCRIPTION PERSONNEL EXPOSURE, CAMS FAIL (Personnel in High Bay and high airborne present)

.....

=====

Normal Operational MPFS

Indicators
Status of Blowers, Vacuum Indicators (Various), flow indicators, cam indicators

Alarms
Loss of Cam, Vacuum System (Various)

Interlocks
HP blower will start on low vacuum

Equipment
Redundant Blower, ARMs (For gross release)

Procedural
Fixed stations read periodically
Procedurally required to investigate CAM failure if known
HP and facility procedure limit access and require check to ensure environment is safe for personnel

Post Event MPFs

Indicators
Blower Status, Vacuum Indicators (Various), cam indicators

Alarms
Loss of Cam, Vacuum System (Various)

Interlocks
HP blower will start on low vacuum

Equipment
Redundant Blower, ARMs (For gross release), High bay building ventilation system will reduce airborne levels

Procedural
Fixed stations read periodically
Procedurally required to investigate CAM failure if known
HP and facility procedure limit access and require check to ensure environment is safe for personnel

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER F-3

HAZARD DESCRIPTION PERSONNEL EXPOSURE, CAMS FAIL (Personnel in High Bay and high airborne present)

Lines of Defense _____

Barriers

No barriers are defined due to undefined source of airborne activity

Preventers

1. Redundant Blowers
2. Access control to area limits potential for worker to enter area.

Mitigator

1. Vacuum system or CAM indications or alarms and operator action.
2. ARMs could detect gross release.
3. HP and facility procedure limit access and require check to ensure environment is safe for personnel
4. High bay ventilation system reduces/removes airborne contaminants
5. Responses to Emergency procedures

1/9/95
ENGINEER/DATE

1-9-95
TECHNICAL REVIEWER/DATE

1/18/95
FACILITY REVIEWER/DATE

FACILITY:	<u>New Waste Transfer Facility</u>
DOCUMENT TITLE	<u>PHR 200-H-484, Rev 1</u>
CARD NUMBER	<u>F-7</u>
HAZARD DESCRIPTION	<u>PERSONNEL EXPOSURE, AREA RADIATION MONITORS ARE LOST (Strong radiation source becomes present after failure of ARM)</u>

=====

Normal Operational MPFS

Indicators

DCS and LCS indicators

Alarms

Alarm LCS panel, Vestibule alarm, DCS Alarm (loss of power, loss of ARM)

Interlocks

None

Equipment

Other ARMs (only applicable in High Bay)

Procedural

HP must be present for work dealing with line breaks or cell work. ARMs are source checked periodically

Post Event MPFs

Indicators

Vestibule Indicator, DCS indicator

Alarms

Alarm LCS panel, Vestibule Alarm, DCS Alarm (on loss of power, loss of ARM)

Interlocks

None

Equipment

Other ARMs (Only in High Bay area)

Procedural

HP must be present for work dealing with line breaks or cell work. ARMs are source checked periodically

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER F-7

HAZARD DESCRIPTION PERSONNEL EXPOSURE, AREA RADIATION MONITORS ARE LOST (Strong
radiation source becomes present after failure of ARM)

Lines of Defense _____

Barriers

(No barriers identified due to unspecified nature of radiation)

Preventers

1. NA

Mitigators

1. Multiple ARMs in locations likely to have contamination
2. Indicators and alarms provide notice of failure
3. Workers in this area have HP training. (Use of SRPDs)
4. Radiation Protection Program Requirements (i.e. surveys periodically required with portable instr.)
5. Responses to Emergency procedures

AS2 [Signature] 1/9/95
ENGINEER/DATE

Gene R. Brusch 1-9-95
TECHNICAL REVIEWER/DATE

Wesley S. Brown 4/18/95
FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev 1
ARD NUMBER F-10
HAZARD DESCRIPTION PERSONNEL EXPOSURE BREATHING AIR IS LOST

=====

Normal Operational MPFS

Indicators

Local

Alarms

Low pressure alarm (local and remote) for system

Interlocks

None

Equipment

None

Design

None at NWTF (Main station does have bottle air reserve)

Procedural

Only trained personnel can use the breathing air system.

Procedural Controls (i.e buddy system, CR announces if system is on bottled air, CR controls number or personnel on system)

Post Event MPFs

Indicators

None

Alarms

Low pressure alarm for system

Interlocks

None

Equipment

None

Design

None at NWTF (Main station does have bottle air reserve)

Procedural

Only trained personnel can use the breathing air system.

Procedural Controls (i.e buddy system, CR announces if system is on bottled air, CR controls number or personnel on system)

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER F-10

HAZARD DESCRIPTION PERSONNEL EXPOSURE, BREATHING AIR IS LOST

Lines of Defense _____

Barriers

NA

Preventers

1. Strict procedural controls (control room notification that system is on bottles requiring exit from area, standby person to hear announcement)

Mitigators

1. Trained personnel use system.
2. System has low pressure alarm.
3. Operator who has to remove breathing air hood in high airborne area will receive medical attention promptly after incident.
4. Procedural controls (Buddy system)
5. Responses to Emergency procedures

1/4/95
ENGINEER/DATE

1-9-95
TECHNICAL REVIEWER/DATE

4/18/95
FACILITY REVIEWER/DATE

FACILITY:	<u>New Waste Transfer Facility</u>
DOCUMENT TITLE	<u>PHR 200-H-484, Rev 1</u>
HAZARD NUMBER	<u>FW-1 a & b</u>
HAZARD DESCRIPTION	<u>INADVERTENT TRANSFER, LIQUID RELEASE, CONTAMINATED FLUSH WATER SENT TO ETF FROM FLUSHWATER TANK OVERFLOW</u>

Normal Operational MPFS

This event no longer applicable due to changes in the design. See action statement # 73 in PHR.

Post Event MPFS

This event no longer applicable due to changes in the design. See action statement # 73 in PHR.

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev 1
HAZARD NUMBER FW-1 a & b
HAZARD DESCRIPTION INADVERTENT TRANSFER, LIQUID RELEASE, CONTAMINATED FLUSH WATER
SENT TO ETF FROM FLUSHWATER TANK OVERFLOW
Lines of Defense _____

Design of facility precludes this event. See action statement 73 in PHR.

1/9/95
ENGINEER/DATE

1-9-95
TECHNICAL REVIEWER/DATE

1/18/95
FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

WARD NUMBER TL-1

HAZARD DESCRIPTION LIQUID RELEASE OR RADIOACTIVITY, F/H INTER-AREA LINE IS OVERPRESSURIZED

=====

Normal Operational MPFS

Indicators

none

Alarms

Conductivity Probe in Leak Detection Box (LDBs drains back to pump pit tanks)

Interlocks

None

Equipment

Transfer pipe, jumpers, pump at dead head below design pressure of transfer lines

Procedural

Pipes with known leaks not used for transfers

Limits on temperature of transferred liquid

Post Event MPFs

Indicators

none

Alarms

Conductivity Probe in Leak Detection Box

Interlocks

None

Equipment

Outer transfer pipe jacket, Leak detection box

Procedural

Transfers secured if pipe develops leak.

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER TL-1

HAZARD DESCRIPTION LIQUID RELEASE OR RADIOACTIVITY, F/H INTER-AREA LINE IS
OVERPRESSURIZED

Lines of Defense _____

Barriers

1. Transfer pipe
2. Pipe outer jacket and LDB's (LDB's drain back to pump pit tanks)

Preventers

1. Design of pipe and correct operation (pressure and temperature of fluid maintained)
2. Periodic pressure tests
3. Piping with known leaks not used for transfers

Mitigators

1. Leak detection (LDB alarm or increasing pump tank level) and operator action
2. Pipe is buried underground (This ensures no airborne material released)
3. Pipe is fully contained in secondary pipe which drains to LDB's
4. Transfer procedures (requirements to do mass balances, limit pressure and temperature)
5. Responses to Emergency procedures

If rupture occurs in HPPT-7 jumper see CDB-12

John H. Kelly 1/9/95
ENGINEER/DATE

Gene R. Brusch 1-9-95
TECHNICAL REVIEWER/DATE

Wesley S. Brown 1/18/95
FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER TL-3

HAZARD DESCRIPTION LIQUID RELEASE OF RADIOACTIVITY. TRANSFER LINE FAILS

.....

.....

=====

Normal Operational MPFS

See TL-1 (Same logic with regards to detection of the leak)

Post Event MPFs

See TL-1

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER TL-3

HAZARD DESCRIPTION LIQUID RELEASE OF RADIOACTIVITY, TRANSFER LINE FAILS

Lines of Defense

See TL-1 (Same logic)

1/9/95
ENGINEER/DATE

1-9-95
TECHNICAL REVIEWER/DATE

1/18/95
FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev 1
WARD NUMBER TL-6
HAZARD DESCRIPTION LIQUID RELEASE OF RADIOACTIVITY, PUMP TANK OVERFLOWS FROM SIPHON

=====

Normal Operational MPFS

Indicators

Tank level indicator, tank level backup indicator

Alarms

Tank Level Alarms

Interlocks

Tank High Level Interlocks (most cases)

Equipment

None

Procedural

Transfer Procedures

Operator Round Sheets

Post Event MPFs

Indicators

tank level indicator, tank level backup indicator, sump level, pump status

Alarms

Tank Level Alarms, Sump Level Alarms (conductivity probe), stack "radiation alarms", high bay cams, high bay ARMs

Interlocks

Tank High Level Interlock, stack alarm-ventilation fan interlock

Equipment

Back-up transfer system available for each tank, transfer system available for each cell, operator can take action to isolate line bringing in incoming fluid (some cases). Cell volume allows large volume for a release, pipe chase and adjacent cells provide additional volume, cell design provides high degree of containment, Cell covers and High Bay Ventilation system provides additional confinement for any airborne leaks from a cell.

Procedural

Emergency Procedures

Transfer Procedure

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev 1
HAZARD NUMBER TL-6
HAZARD DESCRIPTION LIQUID RELEASE OF RADIOACTIVITY... PUMP TANK OVERFLOWS FROM SIPHON...
Lines of Defense _____

Barriers

1. Tank, lines, jumpers (primary)
2. Cell/Sump/Pipe Chase and Adjacent Cells(Secondary)
3. High Bay Curb

Preventers

1. Operator Action and (Tank indications or alarms)
2. Tank High Level Interlock

Mitigators

1. Operator Action and (Sump Level alarms or indicators)
2. Operator Action and (Stack, cam or building activity/radiation alarms)
3. Operator Action in response to alarm in adjacent cell
4. The tank, cell, and adjacent cell volumes act as mitigators in that they comprise such a large volume that it practically incredible that there combined volume would be exceeded prior to the transfer being stopped.
5. Responses to Emergency procedures

[Signature] 1/9/95
ENGINEER/DATE

[Signature] 1-9-95
TECHNICAL REVIEWER/DATE

[Signature] 1/13/95
FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER TL-8

HAZARD DESCRIPTION LIQUID RELEASE OF RADIOACTIVITY. WATER HAMMER OCCURS.

=====

Normal Operational MPFS

See TL-1 (Same logic with regards to detection of the leak) for transfer lines
See CDB-12 for jumpers

Post Event MPFs

See TL-1 (Same logic with regards to detection of the leak) for transfer lines
See CDB-12 jumpers

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER TL-8

HAZARD DESCRIPTION LIQUID RELEASE OF RADIOACTIVITY. WATER HAMMER OCCURS

Lines of Defense

See TL-1 (Same logic with regards to detection of the leak) for transfer lines
See CDB-12 for jumpers

Sh2 1/9/95
ENGINEER/DATE

Gene R. Brunelli 1-9-95
TECHNICAL REVIEWER/DATE

William S. Brown 4/18/95
FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

WARD NUMBER TL-10

HAZARD DESCRIPTION LIQUID RELEASE OF RADIOACTIVITY. THE F/H INTER-AREA LINE HIGH POINT PIT OVERFLOWS

=====

Normal Operational MPFS

Indicators

none

Alarms

none

Interlocks

none

Equipment

none

Procedural

Transfer Procedure (i.e mass balances)

Post Event MPFs

Indicators

none

Alarms

Sump Alarm (conductivity probe) for high point pump pit alarms at NWTF

Interlocks

none

Equipment

none

Procedural

Transfer Procedure (i.e mass balances)

Emergency Procedures

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev 1
HAZARD NUMBER TL-10
HAZARD DESCRIPTION LIQUID RELEASE OF RADIOACTIVITY. THE F/H INTER-AREA LINE HIGH POINT PIT OVERFLOWS
Lines of Defense _____

Barriers

The release happens outside the facility boundaries so this portion is NA with respect to NWTF

Preventers

1. Transfers are done by procedure.

Mitigators

1. Sump alarm and operator action
2. Responses to Emergency procedures

Shirley 1/9/95
ENGINEER/DATE

Gene R. Brusch 1-9-95
TECHNICAL REVIEWER/DATE

Wesley S. Brown 1/18/95
FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

WARD NUMBER BCR-06

HAZARD DESCRIPTION RELEASE OF RADIOACTIVITY (AIRBORNE OR LIQUID), AIR CONDITIONING IS LOST TO FOS ROOM

=====

Normal Operational MPFS

Indicators

PCM Cabinet Temperature, FOS room temp

Alarms

FOS room high temperature, PCM cabinet High Temp, AC unit trouble alarm, Sys. status alarm on loss of a PCM

Interlocks

none

Equipment

AC unit and backup, dual PCMs

Procedural

Surveillance of AC unit status, FOS room temps, PCM temps

Post Event MPFs

Indicators

PCM Cabinet Temperature, FOS room temp

Alarms

FOS room high temperature, PCM cabinet High Temp, AC unit trouble alarm, Sys. status alarm on loss of a PCM

Interlocks

Watchdog timer (on loss of both PCMs will place NWTF equipment in a fail safe condition)

Equipment

Backup AC unit, dual PCMs

Procedural

Start redundant AC unit on main AC unit trouble or High room or PCM temp.

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev 1
HAZARD NUMBER BCR-06
HAZARD DESCRIPTION RELEASE OF RADIOACTIVITY (AIRBORNE OR LIQUID). AIR CONDITIONING IS LOST TO FOS ROOM
Lines of Defense _____

Barriers

See CDB-1 for typical barriers for a liquid release
See CDB-47 for typical barriers for an airborne release

Preventers

1. Operator action and response to alarm or abnormal indication (i.e FOS or PCM high temp)
2. Watchdog timer (most cases)

Mitigators (assumes watchdog timer fails or resultant actions of timer do not stop event)

1. Operator notices system malfunction and responds
2. Abnormal indications during transfer and operator action
3. Responses to Emergency procedures

Sh2 Kelly 1/9/95
ENGINEER/DATE

Gene R. Brusch 1-9-95
TECHNICAL REVIEWER/DATE

Wesley S. Brown 1/18/95
FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev 1
ARD NUMBER DCS-2
HAZARD DESCRIPTION Atmospheric or Liquid Release - DWPF system goes down partially or fully
.....
.....

=====

Normal Operational MPFS

Due to design changes this event is no longer applicable

Post Event MPFs

Due to design changes this event is no longer applicable

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev 1
HAZARD NUMBER DCS-2
HAZARD DESCRIPTION Atmospheric or Liquid Release - DWPF system goes down partially or fully
Lines of Defense _____

Due to design changes this event is no longer applicable. NWTF is separated from DWPF data highway network.

1/9/95
ENGINEER/DATE

Gene R. Brucchi 1-9-95
TECHNICAL REVIEWER/DATE

Wesley S. Brown 1/18/95
FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

WARD NUMBER SW-1

HAZARD DESCRIPTION Liquid Release -Radioactive material reaches stormwater system from an NWTF building or system (Hi Bay curb overflow, From H&V system)

=====

Normal Operational MPFS

Indicators

Sump levels, Loss of ventilation pressure readings, ARMs

Alarms

Sump probes, Pipe chase probe, Hi Bay ARMs, PVV HEPA room cond. probe

Interlocks

None

Equipment

Cells, Pipe Chase, Hi Bay curb

Curbs in Vent Bldg

Drain header to HPT10

Procedural

Operator Round

Post Event MPFs

Indicators

Visual from operator

Alarms

None

Interlocks

None

Equipment

Cells, Pipe Chase, Hi Bay curb

Curbs in Vent Bldg

Drain header to HPT10

Procedural

Operator Round

Emergency Response

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER SW-1

HAZARD DESCRIPTION Liquid Release -Radioactive material reaches stormwater system from an NWTF
building or system (Hi Bay curb overflow, From H&V system)

Lines of Defense _____

Barriers

1. Cells/Pipe chase/Hi Bay curb, Vent sys (demister, condenser, Heater, HEPA) (primary)
2. Vent building curbing, Drain header to HPT 10, (secondary)

Preventors

Operator action in response to indicators, alarms or visual indication of filling
Condensate radiation monitor routs condensate to HPT 10
Blind flanges on Chemical addition lines

Mitigators

Operator action after overflow has started
Responses to Emergency procedures

1/9/95
ENGINEER/DATE

Gene R. Brusch 1-9-95
TECHNICAL REVIEWER/DATE

Wesley S. Brown 1/13/95
FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

WARD NUMBER EARTHQUAKE

HAZARD DESCRIPTION AIRBORNE RELEASE, HYDROGEN EXPLOSION IN PUMP TANK FOLLOWING
DESIGN BASIS EARTHQUAKE

=====

Normal Operational MPFS

Indicators

Tank Level, Vent Flow, Vent pressures, Radiation, Pump Status, Sump Level, Loss of ventilation indicated on DCS, Bldg/pit and tank/pit d/p

Alarms

Tank Level, Radiation Alarms, Bldg/pit and tank/pit d/p, Sump Probe

Interlocks

Standby feature for Vent blower. Redundant blowers

Equipment

Fans, Ducting Tank, Jumpers, Vent Pipes, Vent Pipe Orifice, Inlet Hepa, Pipe Chase, Stack, Filter Building, Cells, Cell Covers

Procedural

Operator Round Sheets

Post Event MPFs

Indicators

Building Damage

Alarms

None

Interlocks

None

Equipment

Tanks, Cell/sumps, HEPA,

Crane restraint

Procedural

Crane parked away from Cell Covers

Emergency Response

FACILITY: New Waste Transfer Facility
DOCUMENT TITLE PHR 200-H-484, Rev 1
HAZARD NUMBER EARTHQUAKE
HAZARD DESCRIPTION AIRBORNE RELEASE, HYDROGEN EXPLOSION IN PUMP TANK FOLLOWING
DESIGN BASIS EARTHQUAKE
Lines of Defense _____

Barriers

Tanks (Primary)
Cell/Sump (Secondary)
Pipe Chase
Adjacent Cells

Preventers

Continuous vent path (per SER)

Mitigators

Waste will be contained in Tanks and HEPA filters. Tanks are below grade in Lined Cells.
The Cells, Cell covers and equipment inside the cells will survive and contain the waste after the DBE.
Crane parked away from Cell Covers and restrained from falling on the Covers. Site emergency
procedures and plans will dictate post event actions.

Thomas G. Hays 1/9/95
ENGINEER/DATE

[Signature] 1/9/95
TECHNICAL REVIEWER/DATE

[Signature] 1/18/95
FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

WARD NUMBER WIND

HAZARD DESCRIPTION AIRBORNE RELEASE, LOSS OF VENTILATION, HYDROGEN EXPLOSION,
FOLLOWING HIGH STRAIGHT WIND AND/OR DESIGN BASIS TORNADO

=====

Normal Operational MPFS

Indicators

Tank Level, Vent Flow, Vent pressures, Radiation, Pump Status, Sump Level, Loss of ventilation indicated on DCS, Bldg/pit and tank/pit d/p

Alarms

Tank Level, Radiation Alarms, Bldg/pit and tank/pit d/p, Sump Probe

Interlocks

Standby feature for Vent blower. Redundant blowers

Equipment

Fans, Ducting Tank, Jumpers, Vent Pipes, Vent Pipe Orifice, Inlet Hepa, Pipe Chase, Stack, Filter Building, Cells, Cell Covers

Procedural

Operator Round Sheets , Fan Failure Response Procedure

Post Event MPFs

Indicators

None

Alarms

None

Interlocks

None

Equipment

Waste will be contained in Tanks and HEPA filters. Tanks are below grade in Lined Cells. The Cells, Cell covers and equipment inside the cells will survive and contain the waste after the wind event. HEPA filters are inside separate concrete walled structure

Procedural

HEPA filters are changed when a predetermined radiation level is reached

Emergency Response

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER WIND

HAZARD DESCRIPTION AIRBORNE RELEASE, LOSS OF VENTILATION, HYDROGEN EXPLOSION,
FOLLOWING HIGH STRAIGHT WIND AND/OR DESIGN BASIS TORNADO

Lines of Defense _____

Barriers

Tanks and HEPA filter (Primary)
Cell/Sump (Secondary)
Pipe Chase
Adjacent Cells

Preventers

Continuous vent path (per SER)

Mitigators

Waste will be contained in Tanks and HEPA filters. Tanks are below grade in Lined Cells.
The Cells, Cell covers and equipment inside the cells will survive and contain the waste after the wind event. Crane restraint to prevent the crane from breaking a cell cover. HEPA filters are inside separate concrete walled structure.
HEPA's are changed based on Radiation level to reduce the potential for spread of contamination.
Responses to Emergency procedures

Thomas G. Hays 1/9/95
ENGINEER/DATE

Blz/ky 1/9/95
TECHNICAL REVIEWER/DATE

Wade S. Brown 4/18/95
FACILITY REVIEWER/DATE

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

ARD NUMBER Loss of Normal Power

HAZARD DESCRIPTION Loss of Normal Power (to NWTF) leads to hydrogen explosion due to loss of ventilation

.....

.....

=====

Normal Operational MPFS

Indicators

Diesel Generator Status
MCC Voltage and Current

Alarms

Loss of Power, UPS trouble

Equipment

Tank, Jumpers, transfer lines
Cell
Building Ventilation system
Process Ventilation System
Battery backup for computer

Procedures

Normal Operations Procedures

Post Event MPFs

Indicators

Diesel Generator Status
MCC Voltage and Current

Alarms

Loss of Power, UPS trouble

Equipment

Tank Jumpers Transfer lines
Cell
Process Ventilation System
Diesel Generator
Battery backup for computer

Procedures

Loss of Normal Power Procedure

FACILITY: New Waste Transfer Facility

DOCUMENT TITLE PHR 200-H-484, Rev 1

HAZARD NUMBER Loss of Normal Power

HAZARD DESCRIPTION Loss of Normal Power (to NWTF) leads to hydrogen explosion due to loss of ventilation....
.....
.....

Lines of Defense
.....

Barriers

1. Tank, jumpers, transfer lines
2. Cells
3. Hi bay curb

Preventors

Continuous vent path (per SER)

Mitigators

1. Batteries will power the DCS and I/O until the diesel generator starts
2. Diesel generator will provide power to maintain Process ventilation and computer equipment needed to shutdown the process and monitor fluid and radiation levels.
3. Isolation and gang valves are air powered (Power from DG to computer will allow continued control of the auto valves.

Procedures

Loss of normal power response procedure.
Responses to Emergency procedures

Thomas J. Day 1/9/95
ENGINEER/DATE

Gene R. Brusch 1-9-95
TECHNICAL REVIEWER/DATE

Wesley S. Brown 1/18/95
FACILITY REVIEWER/DATE

APPENDIX C

LINES OF DEFENSE

SUMMARY TABLE

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HAZARD NUMBER	HAZARD DESCRIPTION	# Norm. Ops. MPF's	# Post Event MPF's	LINES OF DEFENSE
CDB-01	Liquid Release - The primary transfer pump for a tank fails (during a continuous transfer)	13	22	<p><u>BARRIERS</u></p> <ol style="list-style-type: none"> 1. Tank (Primary) 2. Cell/sump (Secondary) 3. Pipe Chase/Adjacent Cells 4. Curbing in High Bay Area <p><u>PREVENTERS</u></p> <ol style="list-style-type: none"> 1. Operator response to round sheet required test of conductivity probe. 2. Operator compliance to transfer and material balance procedures 3. Operator Action and (Pump indications or alarms) 4. Operator Action and (Tank indications or alarms) 5. Tank High Level Interlock (some cases) <p><u>MITIGATORS</u></p> <ol style="list-style-type: none"> 1. Operator Action and (Sump Level alarm or indicator) 2. Operator round sheets and subsequent action 3. Operator Action and (Adjacent Cell Alarms) 4. Operator Action and (Stack, cam or building activity/radiation alarms) 5. The tank, cell, and adjacent cell volumes act as mitigators in that they comprise such a large volume that it is practically incredible that their combined volume would be exceeded prior to the transfer being stopped. 6. Responses to Emergency procedures 7. Any airborne material contained by process vessel vent and building ventilation systems.

HAZARD NUMBER	HAZARD DESCRIPTION	# Norm. Ops. MPF's	# Post Event MPF's	LINES OF DEFENSE
CDB-5	Liquid Release - A tank leaks or fails. (No transfer in Progress)	5	9	<u>BARRIERS</u> 1. Tank (Primary) 2. Cell/sump (Secondary) <u>PREVENTERS</u> 1. Design of Tank (Stainless Steel) and correct operation (i.e., chemistry control and temperature limits on incoming material) <u>MITIGATORS</u> 1. Cell volume will contain contents of full tank 2. Operator Action (i.e. jetting sump contents to tank and transferring tank contents to other tank) and response to alarm or abnormal reading from (tank or sump instruments) based on transfer procedure guidance 3. Building and process vessel vent systems contain any airborne material. 4. Responses to Emergency procedures

HAZARD NUMBER	HAZARD DESCRIPTION	# Norm. Ops. MPF's	# Post Event MPF's	LINES OF DEFENSE
CDB-7	Liquid Release - The level instrumentation in the sump fails (Loss of conductivity probe or bubbler and subsequent release to cell (CDB-1, CDB-5, CDB-12)", "	8	20	<u>BARRIERS</u> 1. Cell/sump/underliner sump (Primary) 2. Pipe chase/adjacent cells High Bay Curbing (Secondary) <u>PREVENTERS</u> 1. Design of Tank (Stainless Steel) and correct operation (i.e., chemistry control and temperature limits on incoming material) 2. Operator action in accordance with transfer procedures based on loss of indications or alarms 3. Periodic calibration of instruments <u>MITIGATORS</u> 1. Cell volume will contain contents of full tank, additional volume available via pipe chase and adjacent cells 2. Operator Action and response to alarm or abnormal reading from (tank or sump instruments) 3. Operator action and response to pipe chase alarm or to adjacent cell indication or alarms. 4. Building and process vessel vent systems contain any airborne material. 5. Operator action and response to stack CAM, high bay CAM, or high bay ARM 6. Responses to Emergency procedures

HAZARD NUMBER	HAZARD DESCRIPTION	# Norm. Ops. MPF's	# Post Event MPF's	LINES OF DEFENSE
CDB-8	Liquid release /Loss of production -The wiring or electrical connectors to a cell fail (Leads to CDB-1, or CDB-7 or Shutdown)	11	10	<p><u>BARRIERS</u></p> <ol style="list-style-type: none"> 1. Tank 2. Cell 3. Pipe Chase and Adjacent Cells <p><u>PREVENTERS</u></p> <ol style="list-style-type: none"> 1. Jumpers are installed and tested by procedure before resuming cell operations 2. Cables rated for radiation environment <p><u>MITIGATORS</u></p> <ol style="list-style-type: none"> 1. The facility is designed to have redundant or backup indications/alarms for critical items as well as multiple methods of performing. There are also emergency procedures to guide the operator in the event of an abnormal occurrence. 2. Electrical wall nozzles can be removed and replaced remotely <p>The PHR refers this event back to CDB-1.</p> <p>Additional components in the LOD table for CDB-1.</p>

HAZARD NUMBER	HAZARD DESCRIPTION	# Norm. Ops. MPF's	# Post Event MPF's	LINES OF DEFENSE
CDB-12	Liquid Release/Loss of Production - A cell jumper fails (Transfer through jumper in progress)	7	18	<p><u>BARRIERS</u></p> <ol style="list-style-type: none"> 1. Tank. jumper, transfer pipe (primary) 2. Cell, Pipe chase and adjacent cells (secondary) <p><u>PREVENTERS</u></p> <p>Design of jumper and formal testing procedure after installation.</p> <p><u>MITIGATORS</u></p> <ol style="list-style-type: none"> 1. Operator action in response to abnormal readings (Transfer procedure requires mass balances), alarms or operation from affected component(s) served by jumper (i.e. sump level/alarm, tank levels/alarms, etc.). The cell volume allows an extensive amount of time for operator action for all events (from a small leak to a line rupture). 2. Building and process vessel vent systems contain any airborne material. <p>A leaking or failed jumper carrying fluid would be comparable to a tank failure. This event is covered by CDB-5. If the failure were to occur in a location such that it could not isolate the leak, the NWTF operator would need to contact the sending facility to have them stop the transfer.</p> <p>For failures of electrical jumpers see CDB-8</p>
CDB-13	Liquid Release - A jumper Leaks	NA	NA	See CDB-12

HAZARD NUMBER	HAZARD DESCRIPTION	# Norm. Ops. MPF's	# Post Event MPF's	LINES OF DEFENSE
CDB-14	Liquid Release/Equipment Damage - Jumper not tightened correctly	NA	NA	See CDB-8 (Electrical) See CDB-12 (Mechanical)
CDB-15	Liquid Release - Automatic or manual valve in a jumper fails (Transfer in progress)	NA	NA	See CDB-1 or 12 (Valve failure will be considered equivalent to jumper failure or overflow of a tank, with the exception that the pump indicators and alarms are not applicable for this scenario)
CDB-17	Liquid Release/Airborne Release/Equipment Damage - Instrument Air is Lost (Transfer in Progress, level indication lost, transfer continues)	10	10	<u>BARRIERS</u> 1. Tank, jumpers, transfer pipe (Primary) 2. Cell/sump (Secondary) 3. Pipe Chase/adjacent cells 4. High Bay Curbing <u>PREVENTERS</u> 1. 30 minute supply in receiver 2. Operator Response to Low pressure alarm or indication (has 30 minutes to respond) 3. Transfer procedures require operator to call transferring facility and have transfer stopped. 4. Automatic valves in jumpers will go to the shut position <u>MITIGATORS</u> 1. Tank and cell volumes provide containment for a long period 2. Conductivity alarm(s) and operator response 3. Responses to Emergency procedures

HAZARD NUMBER	HAZARD DESCRIPTION	# Norm. Ops. MPF's	# Post Event MPF's	LINES OF DEFENSE
CDB-19	Liquid Release - Air to jet is lost (plant air is lost causing vacuum in jet transfer piping)	7	6	<p><u>BARRIERS</u></p> <ol style="list-style-type: none"> 1. Jet transfer piping 2. Curbing around floor areas under gang valves <p><u>PREVENTERS</u></p> <ol style="list-style-type: none"> 1. Pressure switch automatically cycles gang valve back to maintenance position 2. Operator restores plant air based on indication. 3. Jet transfer cannot start unless plant air is available at the start of the transfer <p><u>MITIGATORS</u></p> <ol style="list-style-type: none"> 1. Gang valve piping acts as containment for material during suckback. 2. Design of system will alert operator that a valve position error has occurred (Alarm that interlock has cycled valve, air blow for less than 5 minutes, valves cycles to vent from steam without operator action). 3. ARMs within 25 feet of gang valve piping. Upon sensing a high radiation level a red light will come on at the vestibule door. 4. Flush water available to remove material in piping. 5. Responses to Emergency procedures
CDB-20	Liquid Release - Steam to jet is lost	NA	NA	See CDB-19 (This accident has the additional protective feature of having plant air, which will do the air blowdown. The air blowdown occurs at the end of a transfer procedure and is the reason suckbacks do not occur. If steam is lost the gang valve will cycle through the air blow position before cycling to the vent position)

HAZARD NUMBER	HAZARD DESCRIPTION	# Norm. Ops. MPF's	# Post Event MPF's	LINES OF DEFENSE
CDB-22	Liquid Release/Airborne Release/Equipment Damage - The gang valve is miss-positioned. (Steam flow continues, Over-flow, pressurize or heat the receiving tank)	7	8	<u>BARRIERS</u> Tank (primary) Cell, pipe chase and adjacent cells (secondary) <u>PREVENTERS</u> 1. Operator action to close manual steam isolation valves (all three cases) 2. Operator action to transfer contents out of receiving tank (overflow and overpressure) 3. Overflow line vents tank (Overpressure) <u>MITIGATORS</u> 1. Operator action to close manual steam isolation valves (all three cases) 2. Operator action to transfer contents out of receiving tank (overflow) 3. Overflow line vents tank (Overpressure) 4. Responses to Emergency procedures
CDB-33	Liquid Release - A pump or motor flies apart (A pump or motor flies apart with a breach of a tank or cell wall due to flying parts)	NA	NA	See CDB-1 and CDB-5. Plus speed control of the pump
CDB-34	Liquid Release - A pump tank overflows	NA	NA	See CDB-1 (The MPFs and lines of defense associated with this event are identical to CDB-1 with the exception that the primary pump may be available as a post event MPF for this event and the pump indicators and alarms would only be applicable if it was the loss of the pump causing the event.)

HAZARD NUMBER	HAZARD DESCRIPTION	# Norm. Ops. MPF's	# Post Event MPF's	LINES OF DEFENSE
CDB-36	Liquid Release - The cell overflows (Loss of indications to cell instrumentation followed by an overflow into the cell)	7	14	<p><u>BARRIERS</u></p> <ol style="list-style-type: none"> 1. Cell/sump (Primary) 2. Pipe Chase/Adjacent Cells (Secondary) 3. Curbing in High Bay Area (some areas) <p><u>PREVENTERS</u></p> <ol style="list-style-type: none"> 1. Tank High Level Interlock (some cases) 2. Operator response to loss of cell indications <p><u>MITIGATORS</u></p> <ol style="list-style-type: none"> 1. Operator round sheets and subsequent action 2. Operator Action and (Adjacent Cell Alarms) 3. Operator Action and (Stack, cam or building activity/radiation alarms) 4. The tank, cell, and adjacent cell volumes act as mitigators in that they comprise such a large volume that it is practically incredible that there combined volume would be exceeded prior to the transfer being stopped. 5. Responses to Emergency procedures

HAZARD NUMBER	HAZARD DESCRIPTION	# Norm. Ops. MPF's	# Post Event MPF's	LINES OF DEFENSE
CDB-47	Airborne Release - Lube oil tank catches on fire (Smoke particles cause pluggage of HEPA filter.)	8	11	<p><u>BARRIERS</u></p> <ol style="list-style-type: none"> 1. Ventilation system with HEPA (primary) HEPA's are greater than 99% efficient. <p><u>PREVENTERS</u></p> <ol style="list-style-type: none"> 1. Administrative controls and cell design 2. lack of ignition sources <p><u>MITIGATORS</u></p> <ol style="list-style-type: none"> 1. Cell Design and HEPA filtered ventilation 2. Redundant HEPA filter 3. Stack cam interlock 4. Lack of combustibles 5. Responses to Emergency procedures
HV-O1 a & b	Airborne Contamination Release, Vessel Vent System fails or Building Ventilation System fails (Hydrogen buildup in tank and subsequent explosion)	7	7	<p><u>BARRIERS</u></p> <ol style="list-style-type: none"> 1. Tank (Primary) 2. Cell (Secondary) 3. High Bay Area <p><u>PREVENTERS</u></p> <ol style="list-style-type: none"> 1. Standby feature for PVV blowers 2. Loss of system indications/alarms and operator action 3. Lack of ignition sources 4. Tank contents gas generation rate and presence of continuous vent path unlikely to result in LFL being exceeded 5. Operator notices abnormal reading and responds appropriately. <p><u>MITIGATORS</u></p> <ol style="list-style-type: none"> 1. Building ventilation or PVV system will filter release. 2. Responses to Emergency procedures

HAZARD NUMBER	HAZARD DESCRIPTION	# Norm. Ops. MPF's	# Post Event MPF's	LINES OF DEFENSE
F-3	Personnel exposure, Cams fail (Personnel in High Bay and high airborne present)	12	12	<u>BARRIERS</u> No barriers are defined due to undefined source of airborne activity <u>PREVENTERS</u> 1. Redundant Blowers 2. Access control to area limits potential for worker to enter area. <u>MITIGATOR</u> 1. Vacuum system or CAM indications or alarms and operator action. 2. ARMs could detect gross release. 3. HP and facility procedure limit access and require check to ensure environment is safe for personnel 4. High bay ventilation system reduces/removes airborne contaminants 5. Responses to Emergency procedures
F-7	Personnel exposure, area radiation monitors are lost (Strong radiation source becomes present after failure of ARM)	8	8	<u>BARRIERS</u> (No barriers identified due to unspecified nature of radiation) Preventers NA <u>MITIGATORS</u> 1. Multiple ARMs in locations likely to have contamination 2. Indicators and alarms provide notice of failure 3. Workers in this area have HP training. (Use of SRPDs) 4. Radiation Protection Program Requirements (i.e. surveys periodically required with portable instr.) 5. Responses to Emergency procedures

HAZARD NUMBER	HAZARD DESCRIPTION	# Norm. Ops. MPF's	# Post Event MPF's	LINES OF DEFENSE
F-10	Personnel exposure, breathing air is lost	6	5	<u>BARRIERS</u> NA <u>PREVENTERS</u> 1. Strict procedural controls (control room notification that system is on bottles requiring exit from area, standby person to hear announcement) <u>MITIGATORS</u> 1. Trained personnel use system. 2. System has low pressure alarm. 3. Operator who has to remove breathing air hood in high airborne area will receive medical attention promptly after incident. 4. Procedural controls (Buddy system) 5. Responses to Emergency procedures
FW-1 a & b	Inadvertent transfer, liquid release, contaminated flush water sent to ETF from flushwater tank overflow	NA	NA	Design of facility precludes this event. See action statement 73 in PHR

HAZARD NUMBER	HAZARD DESCRIPTION	# Norm. Ops. MPF's	# Post Event MPF's	LINES OF DEFENSE
TL-1	Liquid release or radioactivity, F/H inter-area line is overpressurized	6	4	<p><u>BARRIERS</u></p> <ol style="list-style-type: none"> 1. Transfer pipe 2. Pipe outer jacket and LDB's (LDB's drain back to pump pit tanks) <p><u>PREVENTERS</u></p> <ol style="list-style-type: none"> 1. Design of pipe and correct operation (pressure and temperature of fluid maintained) 2. Periodic pressure tests 3. Piping with known leaks not used for transfers <p><u>MITIGATORS</u></p> <ol style="list-style-type: none"> 1. Leak detection (LDB alarm or increasing pump tank level) and operator action 2. Pipe is buried underground (This ensures no airborne material released) 3. Pipe is fully contained in secondary pipe which drains to LDB's 4. Transfer procedures (requirements to do mass balances, limit pressure and temperature) 5. Responses to Emergency procedures <p>If rupture occurs in HPT-7 jumper see CDB-12</p>
TL-3	Liquid release of radioactivity, transfer line fails	NA	NA	See TL-1 (Same logic)

HAZARD NUMBER	HAZARD DESCRIPTION	# Norm. Ops. MPF's	# Post Event MPF's	LINES OF DEFENSE
TL-6	Liquid release of radioactivity , pump tank overflows from siphon	6	20	<u>BARRIERS</u> 1. Tank, lines, jumpers (primary) 2. Cell/Sump/Pipe Chase and Adjacent Cells(Secondary) 3. High Bay Curb <u>PREVENTERS</u> 1. Operator Action and (Tank indications or alarms) 2. Tank High Level Interlock <u>MITIGATORS</u> 1. Operator Action and (Sump Level alarms or indicators) 2. Operator Action and (Stack, cam or building activity/radiation alarms) 3. Operator action in response to alarm in adjacent cell 4. The tank, cell, and adjacent cell volumes act as mitigators in that they comprise such a large volume that it practically incredible that there combined volume would be exceeded prior to the transfer being stopped. 5. Responses to Emergency procedures
TL-8	Liquid release of radioactivity, water hammer occurs	NA	NA	See TL-1 (Same logic with regards to detection of the leak) for transfer lines See CDB-12 for jumpers

HAZARD NUMBER	HAZARD DESCRIPTION	# Norm. Ops. MPF's	# Post Event MPF's	LINES OF DEFENSE
TL-10	Liquid release of radioactivity, the F/H inter-area line high point pit overflows	1	3	<u>BARRIERS</u> The release happens outside the facility boundaries so this portion is NA with respect to NWTF <u>PREVENTERS</u> 1. Transfers are done by procedure. <u>MITIGATORS</u> 1. Sump alarm and operator action 2. Responses to Emergency procedures
BCR-06	Release of radioactivity (airborne or liquid), air conditioning is lost to FOS room.	11	11	<u>BARRIERS</u> See CDB-1 for typical barriers for a liquid release See CDB-47 for typical barriers for an airborne release <u>PREVENTERS</u> 1. Operator action and response to alarm or abnormal indication (i.e. FOS or PCM high temp) 2. Watchdog timer (most cases) <u>MITIGATORS</u> (assumes watchdog timer fails or resultant actions of timer do not stop event) 1. Operator notices system malfunction and responds 2. Abnormal indications during transfer and operator action 3. Responses to Emergency procedures
DCS-2	Atmospheric or Liquid Release - DWPF system goes down partially or fully	NA	NA	Due to design changes this event is no longer applicable. NWTF is separated from DWPF data highway network

APPENDIX D

SUGGESTED WORKER SAFETY ITEMS

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HAZARD NUMBER	HAZARD DESCRIPTION	SUGGESTED WORKER PROTECTION ITEMS
CDB-01	Liquid Release - The primary transfer pump for a tank fails (during a continuous transfer)	1. Cell and cell cover to contain hazard and shield workers 2. Sump level indicator or radiation monitoring to warn worker of potential cell overflow 3. Transfer procedure sections requiring mass balances 4. Limits on the characteristics of the waste to be processed
CDB-5	Liquid Release - A tank leaks or fails. (No transfer in Progress)	See CDB-01
CDB-7	Liquid Release - The level instrumentation in the sump fails (Loss of conductivity probe or bubbler and subsequent release to cell (CDB-1, CDB-5, CDB-12)", "	See CDB-01
CDB-8	Liquid release /Loss of production -The wiring or electrical connectors to a cell fail (Leads to CDB-1, or CDB-7 or Shutdown)	See CDB-01
CDB-12	Liquid Release/Loss of Production - A cell jumper fails (Transfer through jumper in progress)	See CDB-01
CDB-13	Liquid Release - A jumper Leaks	See CDB-01
CDB-14	Liquid Release/Equipment Damage - Jumper not tightened correctly	See CDB-01
CDB-15	Liquid Release - Automatic or manual valve in a jumper fails (Transfer in progress)	See CDB-01
CDB-17	Liquid Release/Airborne Release/Equipment Damage - Instrument Air is Lost (Transfer in Progress, level indication lost, transfer continues)	See CDB-01

HAZARD NUMBER	HAZARD DESCRIPTION	SUGGESTED WORKER PROTECTION ITEMS
CDB-19	Liquid Release - Air to jet is lost (plant air is lost causing vacuum in jet transfer piping)	See CDB-01
CDB-20	Liquid Release - Steam to jet is lost	See CDB-01
CDB-22	Liquid Release/Airborne Release/Equipment Damage - The gang valve is miss-positioned. (Steam flow continues, Over-flow, pressurize or heat the receiving tank)	See CDB-01
CDB-33	Liquid Release - A pump or motor flies apart (A pump or motor flies apart with a breach of a tank or cell wall due to flying parts)	See CDB-01
CDB-34	Liquid Release - A pump tank overflows	See CDB-01
CDB-36	Liquid Release - The cell overflows (Loss of indications to cell instrumentation followed by an overflow into the cell)	See CDB-01
CDB-47	Airborne Release - Lube oil tank catches on fire (Smoke particles cause pluggage of HEPA filter.)	See CDB-01
HV-O1 a & b	Airborne Contamination Release, Vessel Vent System fails or Building Ventilation System fails (Hydrogen buildup in tank and subsequent explosion)	1. If explosion is determined to be credible, the PVV will protect the worker
F-3	Personnel exposure, Cams fail (Personnel in High Bay and high airborne present)	1. CAMS may be required for worker protection if the doses exceed the worker protection criteria of 225, Rev. 2.

HAZARD NUMBER	HAZARD DESCRIPTION	SUGGESTED WORKER PROTECTION ITEMS
F-7	Personnel exposure, area radiation monitors are lost (Strong radiation source becomes present after failure of ARM)	1. ARMS may be required for worker protection if the doses exceed the worker protection criteria of 225, Rev. 2.
F-10	Personnel exposure, breathing air is lost	1. Administrative controls that require control room operator to monitor usage and announce failure and the requirement to have a "buddy".
FW-1 a & b	Inadvertent transfer, liquid release, contaminated flush water sent to ETF from flushwater tank overflow	1. Configuration Control Program to maintain this as an incredible event
TL-1	Liquid release or radioactivity, F/H inter-area line is overpressurized	1. Configuration Control Program to keep pump max. Pressure below pipe design pressure.
TL-3	Liquid release of radioactivity, transfer line fails	See CDB-01
TL-6	Liquid release of radioactivity , pump tank overflows from siphon	See CDB-01
TL-8	Liquid release of radioactivity, water hammer occurs	See CDB-01
TL-10	Liquid release of radioactivity, the F/H inter-area line high point pit overflows	None postulated
BCR-06	Release of radioactivity (airborne or liquid), air conditioning is lost to FOS room.	1. Cell & Cell cover to contain hazard & shield workers. 2. Sump level indicator or radiation monitors to warn worker of potential cell overflow. 3. Transfer procedure sections requiring mass balances. 4. Limits on the characteristics of the waste to be processed
DCS-2	Atmospheric or Liquid Release - DWPF system goes down partially or fully	N/A

HAZARD NUMBER	HAZARD DESCRIPTION	SUGGESTED WORKER PROTECTION ITEMS
SW-1	Liquid Release -Radioactive material reaches stormwater system from an NWTF building or system (Hi Bay curb overflow, From H&V system)	1. Evacuation Procedures
Earthquake	Airborne release, hydrogen explosion in pump tank following design basis earthquake	See HV-01 plus 1. Crane restraint and Admin. Control on parking position.
WIND	Airborne release, loss of ventilation, hydrogen explosion, following high straight wind and/or design basis tornado	See HV-01
Loss of Normal Power	Loss of Normal Power (to NWTF) leads to hydrogen explosion due to loss of Ventilation	See HV-01