AUG 31 1994 ENGINEERING DATA TRANSMITTAL					Page 1 of <u>174</u> 1. EDT No. <u>00516</u>						
2. To: (Receiving Organization) PFP OPERATIONS			3. From: (Originating Organization) PFP FACILITY SYSTEMS ENGINEERING			4. Related EDT No.: N/A					
5. Proj./Prog./Dept./Div.: 15510 / K6C4B			6. Cog. Engr.: J.M. MORLEY			7. Purchase Order No.: N/A					
8. Originator Remarks: ISSUANCE OF TEEM DOCUMENT FOR BUDGIT HAND HOISTS						9. Equip./Component No.: H0054-H0059					
						10. System/Bldg./Facility: 41 / 234-5Z					
						12. Major Assm. Dwg. No.: N/A					
						13. Permit/Permit Application No.: N/A					
11. Receiver Remarks:						14. Required Response Date: N/A					
15. DATA TRANSMITTED						(F)	(G)	(H)	(I)		
(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted		Impact Level	Reason for Transmittal	Originator Disposition	Receiver Disposition		
1	WHC-SD-CP-TEEM-068		0	PFP BUDGIT HAND HOISTS		3	2	4			
16. KEY											
Impact Level (F)		Reason for Transmittal (G)				Disposition (H) & (I)					
1, 2, 3, or 4 (see MRP 5.43)		1. Approval 4. Review 2. Release 5. Post-Review 3. Information 6. Dist. (Receipt Acknow. Required)				1. Approved 4. Reviewed no/comment 2. Approved w/comment 5. Reviewed w/comment 3. Disapproved w/comment 6. Receipt acknowledged					
(G)	(H)	17. SIGNATURE/DISTRIBUTION (See Impact Level for required signatures)								(G)	(H)
Reason	Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN	(J) Name	(K) Signature	(L) Date	(M) MSIN	Reason	Disp.
2	1	Cog. Eng. J.M. MORLEY		T4-32		J.M. Morley		8/17/94	T4-32		
2	1	Cog. Mgr. G.A. GLOVER		T4-20		G.A. Glover		8/18/94	T4-20		
		QA									
2	1	Safety A.G. PINES		T4-10							
		Env.									
3		Central Files		L8-04							
3		Osti (2)		L8-07							
18.				19.		20.		21. DOE APPROVAL (if required)			
Signature of EDT Originator <i>J.M. Morley</i>				Date 8/17/94		Cognizant Manager <i>[Signature]</i>		Date 8/18/94		Ltr No. _____ ☐ Approved ☐ Approved w/comments ☐ Disapproved w/comments	
Authorized Representative for Receiving Organization				Date							

DISCLAIMER

Portions of this document may be illegible in electronic image products. Images are produced from the best available original document.

UNREVIEWED SAFETY QUESTION CHANGES SCREENING FORM

Document Number
EDT 700516

2 of 4

USQ Screening Number

Title
PFP Budget Hand Hoists; WHC-SD-CP-TEEM-068

QUESTIONS:

Does the referenced item:	N/A	No	Yes/Maybe
A. Make PROPOSED CHANGES to the facility or procedures which differ from conditions described in the safety basis?	☐	☒	☐
B. Make PROPOSED CHANGES that represent conditions that have not been analyzed in the safety basis?	☐	☒	☐
C. Describe tests or experiments which differ from those described in the safety basis?	☐	☒	☐
D. Is a change to the TSRs involved?	☐	☒	☐

BASIS (supporting information is required for each question; attach additional pages as necessary):

- A. The system affected by this change is not described in WHC-SD-CP-SAR-021. This change does not affect the authorization basis.
 B/C/D There are no procedures, tests or experiments affected by this change. No tests or experiments are involved.

USQE No. 1

Gerald P. Wilson
Signature

August 17, 1994
Date

Gerald P. Wilson
(Print Name)

☒ Agree

☐ Disagree (Requires explanation, attach additional pages as necessary)

USQE No. 2

GA Glen
Signature

8/18/94
Date

GA Glen
(Print Name)

UNREVIEWED SAFETY QUESTION (USQ) SCREENING AND SAFETY EVALUATION

08/31/94

1. Identification Number: EDT 700516	Completion of page one of this form satisfies the Screening Evaluation	Page <u>32</u> of <u>43</u>
---	--	-----------------------------

2. Title: **PFP BUDGIT HAND HOISTS; WHC-SD-CP-TEEM-068**

3. Qualified USQ Evaluator: G.P. WILSON	Date: 08/17/94
--	-----------------------

4. Peer Reviewer: **R.J. THOMAS**

5. Is the matter being evaluated a CHANGE or a DISCOVERY? (Circle One) **CHANGE**

6. USQ Screening (Answer the appropriate set of questions.)

Does the proposed change:

A. Make changes in the facility as described in approved safety analyses?	☒ No	☐ Yes/Maybe
B. Make changes in procedures as described in approved safety analyses?	☒ No	☐ Yes/Maybe
C. Involve tests or experiments not described in approved safety analyses?	☒ No	☐ Yes/Maybe

Will response to the discovery:

A. Require changes to the facility as described in the approved safety analyses?	☒ No	☐ Yes/Maybe
B. Require changes in procedures described in the approved safety analyses?	☒ No	☐ Yes/Maybe
C. Require tests or experiments not described in the approved safety analyses?	☒ No	☐ Yes/Maybe
D. Require revision or addition to SAR beyond annual update?	☒ No	☐ Yes/Maybe

BASIS (supporting information is required for each question, attach additional pages as necessary; specifically note SAR section reviewed to come to conclusion):

6A. THE SYSTEM AFFECTED BY THIS CHANGE IS NOT DESCRIBED IN WHC-SD-CP-SAR-021. THIS CHANGE DOES NOT AFFECT THE AUTHORIZATION BASIS.

6B/C PROCEDURES, TESTS, OR EXPERIMENTS ARE NOT AFFECTED BY THIS CHANGE. NO TESTS OR EXPERIMENTS ARE INVOLVED.

7. Safety Analyses

A. Will the proposed change or response to the discovery require a change to the existing Technical Specifications or Operational Safety Requirements?	☒ No	☐ Yes/Maybe
B. Will the proposed change or discovery require additional Technical Specification or Operational Safety Requirements?	☒ No	☐ Yes/Maybe

BASIS (supporting information is required for each question, attach additional pages as necessary; specifically note Technical Specification/Operational Safety Requirements reviewed to come to conclusion):

7A/B. NO CHANGES TO THE OSR'S OR ADDITIONAL OSR'S ARE REQUIRED.

8. Post Review (Required if all questions answered "NO")

Reviewer: <u><i>Grand P. Wilson</i></u> Safety Qualified USQ Evaluator (Print name, sign and date)	Date: <u><i>8/11/94</i></u>	If any question on page one in Blocks 6 or 7 is answered "Yes", completion of page two is required and is the Safety Evaluation
--	-----------------------------	---

Identification Number: EDT 700516

SAFETY EVALUATION

Page 43 of 43

1. USQ Safety Evaluation:

9/8/31/94

These questions shall be answered if any question in block 6 or 7 is answered "YES."

A. Will the probability of an accident previously evaluated in approved safety analyses be increased?	☒ No	☐ Yes	☐ Maybe
B. Will the consequences of an accident previously evaluated in the approved safety analyses be increased?	☒ No	☐ Yes	☐ Maybe
C. Will the probability of a malfunction of equipment important to safety be increased?	☒ No	☐ Yes	☐ Maybe
D. Will the consequences of a malfunction of equipment important to safety be increased?	☒ No	☐ Yes	☐ Maybe
E. Will the possibility of an accident of a different type than any previously evaluated in approved safety analyses be created?	☒ No	☐ Yes	☐ Maybe
F. Will the possibility of a malfunction of a different type than any previously evaluated in the approved safety analyses be created?	☒ No	☐ Yes	☐ Maybe
G. Will the margin of safety as defined in the basis for any technical specification or safety analysis report be reduced?	☒ No	☐ Yes	☐ Maybe

BASIS (supporting information is required for each question, attach additional pages as necessary):

1A/B/C/D. THE PROBABILITY/CONSEQUENCES OF ACCIDENTS/MALFUNCTIONS DUE TO THIS CHANGE WILL NOT BE INCREASED OVER THAT ANALYZED IN THE FSAR.

1E/F/G. THIS CHANGE DOES NOT CREATE THE POSSIBILITY OF AN ACCIDENT/MALFUNCTION OF A DIFFERENT TYPE THAN THAT ANALYZED IN WHC-SD-HS-SAR-021, CHAPTER 9. THE MARGIN OF SAFETY WILL NOT BE REDUCED.

THIS CHANGE DOES NOT REPRESENT AN UNREVIEWED SAFETY QUESTION.

2. Plant Review Committee (PRC)*

Meeting No. NA

Date: _____

PRC Chairman Concurrence
(Print name, sign and date)

3. Safety Review**

Date: _____

Qualified USQ Evaluator
(Print name, sign and date)

* If PRC changes any answers, append basis for change.

** Post-review required if all seven "NO" boxes are checked by PRC.

RELEASE AUTHORIZATION

Document Number: WHC-SD-CP-TEEM-068

Document Title: PFP BUDGIT HAND CHAIN HOISTS

Release Date: 08-30-94

* * * * *

This document was reviewed following the
procedures described in WHC-CM-3-4 and is:

APPROVED FOR PUBLIC RELEASE

* * * * *

WHC Information Release Administration Specialist:

Jamara Kohn for Chris Willingham

C. Willingham
(Signature)

08-30-94
(Date)

SUPPORTING DOCUMENT		1. Total Pages <u>13</u> ¹²
2. Title PFP BUDGIT HAND CHAIN HOISTS	3. Number WHC-SD-CP-TEEM-068	4. Rev No. 0
5. Key Words 1/2 TON THRU 1 TON HAND CHAIN HOISTS	6. Author Name: J.M. MORLEY <i>J.M. Morley</i> Signature Organization/Charge Code 15510 K6C4D	
APPROVED FOR <i>CW 8/30/94</i> PUBLIC RELEASE		
7. Abstract DOCUMENT IDENTIFIES VENDOR SUGGESTED MAINTENANCE, DEVIATIONS FROM SUGGESTED REQUIREMENTS AND PROVIDES SUPPORT FOR PREVENTIVE MAINTENANCE PROCEDURES.		
8. PURPOSE AND USE OF DOCUMENT - This document was prepared for use within the U.S. Department of Energy and its contractors. It is to be used only to perform, direct, or integrate work under U.S. Department of Energy contracts. This document is not approved for public release until reviewed. PATENT STATUS - This document copy, since it is transmitted in advance of patent clearance, is made available in confidence solely for use in performance of work under contracts with the U.S. Department of Energy. This document is not to be published nor its contents otherwise disseminated or used for purposes other than specified above before patent approval for such release or use has been secured, upon request, from the Patent Counsel, U.S. Department of Energy Field Office, Richland, WA. ✓ DISCLAIMER - This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, nor any of their contractors, subcontractors or their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or any third party's use or the results of such use of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.		10. RELEASE STAMP <div style="border: 2px solid black; padding: 10px; text-align: center;"> OFFICIAL RELEASE BY WHC DATE AUG 31 1994 55 <i>STA.S</i> </div>
9. Impact Level 3S		

MASTER

875

TECHNICAL EVALUATION OF EQUIPMENT MAINTENANCE
WHC-SD-CP-TEEM-068
PFP BUDGIT HAND HOISTS

Issued by
WESTINGHOUSE HANFORD COMPANY

for the

U.S. DEPARTMENT OF ENERGY
RICHLAND OPERATIONS OFFICE
RICHLAND, WASHINGTON

	Name (print or type)	Signature	Date
PREPARED BY:	<u>K.M. BLACK</u> Name/Title	<u>K.M. Black</u>	<u>8/17/94</u>
WHC APPROVALS:	<u>J.M. Morley</u> Cognizant Engineer	<u>J.M. Morley</u>	<u>8/17/94</u>
	<u>GA Glover</u> Manager, COG Eng.	<u>GA Glover</u>	<u>8/18/94</u>
	<u>AG Pines</u> Safety- HSF	<u>AG Pines</u>	<u>8/22/94</u>

Note: Budgit Hand Hoists are a Trade Mark of Lift Tech Hoists

WHC-SD-CP-TEEM-068, REV 0
Technical Evaluation of Equipment Maintenance
PFP BUDGIT HAND HOISTS

TABLE OF CONTENTS

1.0 - APPLICABLE EQUIPMENT	1
2.0 - PREVENTATIVE MAINTENANCE EVALUATIONS	2
2.1 DAILY OR BEFORE USE CHECKS	2
2.2 WEEKLY CHECKS	3
2.3 SEMI-ANNUAL CHECKS	3
2.4 5 YEAR CHECK	5
2.5 ACTIVITIES NOT PERFORMED PER VI RECOMMENDATIONS	6
2.6 VENDOR RECOMMENDATIONS THAT ARE NOT APPLICABLE	6
3.0 - REFERENCES	7
APPENDIX A - EQUIPMENT HISTORY	8
APPENDIX B - NAMEPLATE DATA	9

WHC-SD-CP-TEEM-068, REV 0
Technical Evaluation of Equipment Maintenance
PFP BUDGIT HAND HOISTS

1.0 - APPLICABLE EQUIPMENT

This Technical Evaluation of Equipment Maintenance (TEEM) is provided principally to document vendor suggested maintenance requirements and deviations from vendor suggested requirements, and provide documentation to support PM procedures. As additional maintenance activities are identified, they will be documented in later revisions.

This equipment is Safety Class 3. Safety class is provided here for reference only. (See WHC-SD-CP-TI-108 Rev 12 for verification)

This TEEM is applicable to the following hoists:

IDENTIFICATION NUMBER	EQUIPMENT
H0054	1/2 Ton capacity hand hoist, serial number 305, located in the tool crib, Room 194 of the 234-5Z building.
H0055	1/2 Ton capacity hand hoist, serial number 305, located in the tool crib, Room 194 of the 234-5Z building.
H0056	1 Ton capacity hand hoist, serial number 229, located in the tool crib, Room 194 of the 234-5Z building.
H0057	1 Ton capacity hand hoist, serial number 055, located in the tool crib, Room 194 of the 234-5Z building.
H0058	1 Ton capacity hand hoist, serial number 229, located in the tool crib, Room 194 of the 234-5Z building.
H0059	1 Ton capacity hand hoist, serial number 22, located in the tool crib, Room 194 of the 234-5Z building.

Equipment Description:

These are BUDGIT hoists, Model 8261 & 8262.

WHC-SD-CP-TEEM-068, REV 0
Technical Evaluation of Equipment Maintenance
PFP BUDGIT HAND HOISTS

2.0 - PREVENTIVE MAINTENANCE EVALUATIONS

2.1 DAILY OR BEFORE USE CHECKS

2.1.1 FUNCTIONAL OPERATION CHECK

Activity - Check that all possible motions are smooth and regular for all speed steps with no hesitations, vibration, binding, weaving, unusual noise, or other irregularity. If chain binds, jumps or is excessively noisy, clean and lubricate with Lubrease Chain and Cable Spray. Check that hand chain moves freely and without binding, and that the hook stops moving when the hand chain stops moving.

Evaluation - Per REF's 3.2, DOE-RL-92-36, Section 12.12.4.3, and 3.1 VI 22589, pgs 2-5.

2.1.2 HOOK INSPECTION

Activity - Ensure that hooks/hook latches show no noticeable damage, wear or deformation.

Evaluation - Per REF's 3.2, DOE-RL-92-36, Section 12.12.4.3, and 3.1 VI 22589, pg 5.

2.1.3 BRAKE OPERATION

Activity - Ensure that brakes operate smoothly.

Evaluation - Per REF's 3.2, DOE-RL-92-36, Section 12.12.4.3, and 3.1 VI 22589, pg 4.

2.1.4 HOIST CHAINS

Activity - Visually ensure that hoisting chains are in good condition with no bends, cracks or pitting, and hoist chain feeds smoothly into and away from sprockets. Inspect chain for excessive wear or stretching by measuring 5 links in accordance with vendor instructions.

Evaluation - Per REF's 3.2, DOE-RL-92-36, Section 12.12.4.3, and 3.1 VI 22589, pgs 4 & 5.

WHC-SD-CP-TEEM-068, REV 0
Technical Evaluation of Equipment Maintenance
PFP BUDGIT HAND HOISTS

2.1.5 LUBRICANT LEAKAGE

Activity - Ensure that there is no visible leakage of lubricant.

Evaluation - Per REF 3.2, DOE-RL-92-36, Section 12.16.6.

2.1.6 CHAIN REEVING

Activity - Inspect load sheave and replace if damaged or worn. Make sure that the welds in standing links are away from load sheave, and that the chain is not capsized, twisted or kinked.

Evaluation - Per REF 3.1 VI 22589, pg 4 & 5.

2.2 WEEKLY CHECKS

2.2.1 CHAIN LUBRICATION

Activity - Lubricate load chain, hook, and safety latch pivot points. Use Lubrease Chain and Cable Spray.

Evaluation - Per REF 3.1 VI 22589, pg 4.

2.3 SEMI-ANNUAL CHECKS

2.3.1 GENERAL INSPECTION

Activity - Inspect the hoist for the following:

- deformed, cracked, or corroded members
- loose or missing bolts or rivets
- cracked or worn sheaves, drums, and load or idler sprockets

WHC-SD-CP-TEEM-068, REV 0
Technical Evaluation of Equipment Maintenance
PFP BUDGIT HAND HOISTS

- worn, cracked or distorted parts such as pins, bearings, shafts, gears, rollers, locking and clamping devices

Evaluation - As Per REF's 3.1, VI 22589, pgs 2-5, and 3.2, DOE-RL-92-36, Section 12.12.4.3.

2.3.2 HOOK INSPECTION

Activity - Dye penetrant, magnetic particle or other suitable crack detecting method should be used for this inspection at the discretion of the COG Engineer. Visually inspect for cracks, increased throat openings, twists, damage to hook retaining nuts, collars, or pins, and welds or rivets used to secure retaining members. Check latch engagement and operation to assure latch is not damaged or bent. Hooks that allow the latch to disengage the tip must be replaced. Look for evidence of heat damage. Causes for rejection include:

- 15% or greater increase in the throat opening
- 10 degree or greater twist of the point away from the shank
- 10% or greater wear in the throat section
- 5% or greater elongation of shank

Note: Actual hook size can be found in the initial JCS work package for new installations. An established base line will have been recorded in the user procedure of PISCES for older equipment.

Any hook that is twisted or has excessive throat opening indicates abuse or over-loading of the unit. Other load sustaining components of the hoist should be inspected for damage.

Evaluation - Per REF 3.2, DOE-RL-92-36, Section 5.4.4, and REF 3.1 VI 22589, pg 5.

WHC-SD-CP-TEEM-068, REV 0
Technical Evaluation of Equipment Maintenance
PFP BUDGIT HAND HOISTS

2.3.3 LOAD CHAIN INSPECTION

Activity - Visually inspect end connections of wire ropes or chains. Check for stiffening or poor hinging of linkage. Look for evidence of heat damage. Causes for rejection include:

- link wear to less than 90% of the original bar diameter
- nicking, cracking, or corrosion of a link that, when ground out to a smooth surface, leaves less than 90% of the original bar diameter

Note: Original bar diameter can be found in the hoist history file.

Evaluation - Per REF 3.2, DOE-RL-92-36, Section 12.14.1

2.3.4 FUNCTIONAL OPERATION

Activity - Check functional operating mechanisms.

Evaluation - Per REF 3.2, DOE-RL-92-36, Section 12.12.4.3.

2.3.5 BRAKE CHECK

Activity - Check brake system parts, pawls, and ratchets. Inspect brake components for worn, glazed, or oil-contaminated friction discs and scoring of the handwheel hub, ratchet, and friction hub. Look for corroded, stretched or broken pawl spring. Ensure free movement of pawl on pawl stud. Apply a thin coat of WD-40 (WD-40 Co.) to the pawl stud before reassembly.

Evaluation - Per REF 3.2, DOE-RL-92-36, Section 12.9.1.

WHC-SD-CP-TEEM-068, REV 0
Technical Evaluation of Equipment Maintenance
PFP BUDGIT HAND HOISTS

2.3.6 LUBRICATION

Activity - When the hoist is disassembled for inspection or cleaning the gears should be lubricated using Calcium soap grease or equivalent.

Be sure to thoroughly clean the old grease from the part before re-lubricating.

Evaluation - Per REF 3.2, DOE-RL-92-36, Section 12.16.6, and REF 3.1 VI 22589, pg 4.

2.4 5 YEAR CHECK

2.4.1 LOAD TEST

Activity - The hoist shall be load tested at 125% of its rated capacity. The test load shall be lifted and held for 5 minutes. Raise the load an additional 2 wraps on the load drum and at least 3 feet, for 5 minutes. Lower the load and suspend for an additional 5 minutes. Throughout the procedure, verify that no slippage of more than 1/2 inch occurs. Following the load test, verify that no load bearing part or hook has been damaged.

Evaluation - Per REF 3.2, DOE-RL-92-36, Section 12.17.2.

2.5 ACTIVITIES NOT PERFORMED PER VI RECOMMENDATIONS

None.

2.6 VENDOR RECOMMENDATIONS THAT ARE NOT APPLICABLE

None.

WHC-SD-CP-TEEM-068, REV 0
Technical Evaluation of Equipment Maintenance
PFP BUDGIT HAND HOISTS

3.0 - REFERENCES

- 3.1 VI file 22589, dated 6/6/94, titled "*Operation, Service, and Parts Manual for Budgit Hand Chain Hoists*," equipment manufacturer - Lift-Tech International Inc.
- 3.2 DOE-RL-92-36, *Hanford Site Hoisting and Rigging Manual*, Westinghouse Hanford Company, latest revision.

WHC-SD-CP-TEEM-068, REV 0
Technical Evaluation of Equipment Maintenance
PFP BUDGIT HAND HOISTS

APPENDIX A
EQUIPMENT HISTORY

As a result of an audit performed by Stone & Webster for the Richland Operations Office of the Department of Energy, equipment history files for the cranes and hoists at PFP were given a base start date of April 1, 1991. These files are maintained by the Cognizant Engineer with responsibility for the oversight of system 41B.

WHC-SD-CP-TEEM-068, REV 0
Technical Evaluation of Equipment Maintenance
PFP BUDGIT HAND HOISTS

APPENDIX B

NAMEPLATE DATA

The nameplate for these hoists should include the following information:

H0054:	Manufacturer:	Budgit
	Model #:	8261
	S/N:	305
	Weight:	1/2 Ton
	Type:	Hand
H0055:	Manufacturer:	Budgit
	Model #:	8261
	S/N:	305
	Weight:	1/2 Ton
	Type:	Hand
H0056:	Manufacturer:	Budgit
	Model #:	8262
	S/N:	229
	Weight:	1 Ton
	Type:	Hand
H0057:	Manufacturer:	Budgit
	Model #:	8262
	S/N:	055
	Weight:	1 Ton
	Type:	Hand
H0058:	Manufacturer:	Budgit
	Model #:	8262
	S/N:	229
	Weight:	1 Ton
	Type:	Hand
H0059:	Manufacturer:	Budgit
	Model #:	8262
	S/N:	22
	Weight:	1 Ton
	Type:	Hand