

# BULLET NOSE ISSUE CHARTER

## 4/22/04 0130 (Rev. 1)

**CAP # 55951**

### Issue Manager

Jeff Maki (Night Shift), Larry Peterson (Day Shift). This is a full time assignment until determined otherwise. Normal outage responsibilities will be turned over to other personnel to be determined at a later time.

### Issue Description

While lifting the Unit 1 reactor vessel head, one Incore Thermal Couple "bullet nose" (guide) came up with the head. The bullet nose should have remained on the thermal couple assembly in the upper internals. This has left the thermal couple bundle exposed, may have generated debris, and may have damaged various components of the assembly.

### Issue Scope

- Locate & retrieve (or account for and disposition) all parts that were present in the original configuration before the guide was inadvertently lifted (clip, O-ring, thermal couple tags, etc.)
- Inspect all vulnerable components for damage and resolve prior to final re-assembly
- Establish recovery actions to safely resume outage activities
- Preserve evidence and establish the apparent cause of the event

### Team Members

*This Charter reflects the initial response team on night shift of 4/21/04. Additional members will be identified as the issue response is developed.*

**Engineering:** Tom Kendall  
**Maintenance Lead:** Chuck Ridings  
**RP Lead:** Brian Carberry  
**Maint. Planning:** Rick Bryan  
**Operations:** Mark Wilcox

### Issue Management Methodology

All aspects of the investigation, inspection, recovery, and repair efforts will proceed in a methodical manner and shall be thoroughly documented for turnover future reference. No intrusive inspections or work will be conducted without prior approval / concurrence of the Plant Manager. Work package 0407919 has been initiated to direct & document work and inspections performed.

G-24

**Expected Milestones / Deliverables**

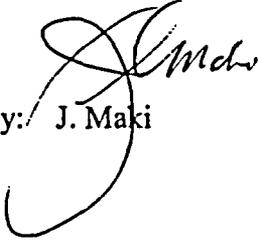
- Account for /retrieve all material / loose parts; expected during the evening of 4/21/04.
- Inspect and document all damage; expected ~0000 on 4/22/04
- Reinstall bullet nose on T/C bundle and initiate flood up of cavity; expected by 0600 on 4/22/04.
- Issue Apparent Cause; expected end of days on 4/22/04

Expected completion of any needed repairs will be determined after inspections have been completed and scope of repairs established.

**Communication Plan**

Initial inspections will be performed by personnel in radio communication with the OCC to expedite necessary support, report findings. Further communication plans to be developed at a later time if needed.

Prepared by:  T. C. Kendall

Approved by:  J. Maki

# INITIAL BULLET NOSE ISSUE PLAN

## 4/21/04 1945

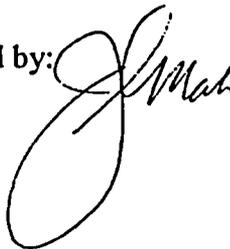
1. Using available equipment (remote cameras, binoculars, manipulator crane, etc.), perform a visual inspection of the affected Thermal Couple (T/C bundle and surrounding area from the 66 ft elevation of containment.
  - a. Inspect for damage to seating surface(s), T/C guides, T/C guide labeling, T/C guide terminations, etc.
  - b. Identify whether bullet nose retaining clip and O-ring are on the upper internals.
  - c. Identify any debris, loose parts, etc. for retrieval.

**Caution: The following step is an intrusive inspection and requires prior approval from the Plant Manager. In addition, coordinate with RP prior to retrieving or handling any unidentified items; they may be highly radioactive.**

2. On the reactor head:
  - a. Remove the rag from the T/C penetration
  - b. Inspect for damage to penetration seating / sealing surfaces, bullet nose.
  - c. Determine whether spring clip is present, and retain it (and any other loose parts or debris) for further evaluation.
3. IF any loose parts, debris, or other unidentified items are determined to be located on the upper core internals, THEN: Make an entry into the upper cavity to positively identify and retrieve the loose items; this will require close support of RP due to the high dose rates and hot particle controls.
4. Flood the upper cavity to a depth of 2-3 ft to provide shielding for further activities.
5. Using a man-basket stabilized by tenders on the 66' elevation, perform a close inspection of the T/C bundle and associated seals. Photograph any damage and document results for evaluation / repair.
6. Using the man-basket, install a new bullet nose (or the previous bullet nose if determined to be acceptable for reuse) with new spring clip and O-ring.
7. Release the upper internals and head for continued outage activities.
8. Determine further actions necessary to support repairs (if needed), and establish the Apparent Cause.

Prepared by: T. C. Kendall

Approved by:

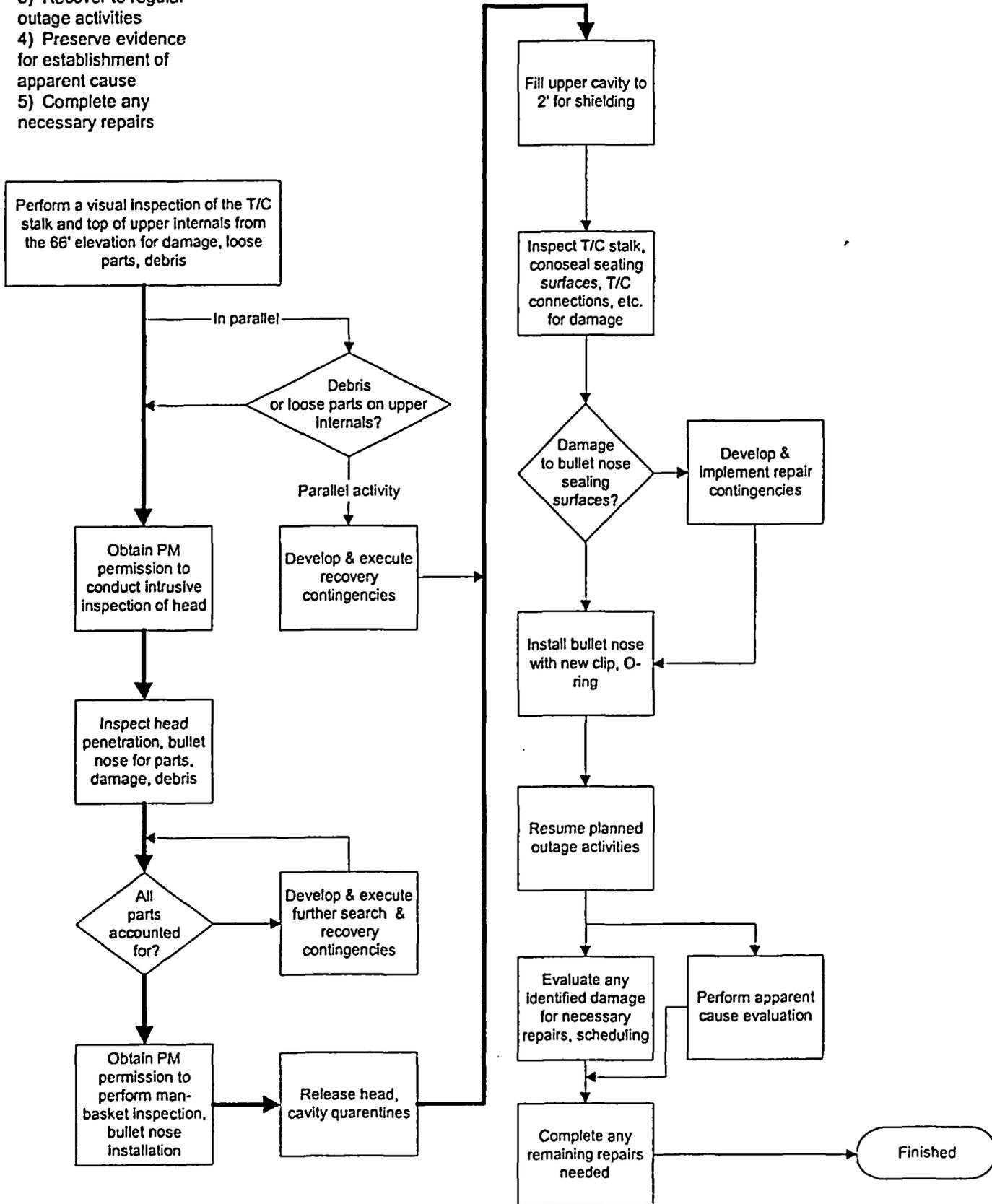
 4/21/04

# Flow Chart for Bullet Nose Issue Resolution

## 4/22/04 0100

**Objectives:**

- 1) Locate & retrieve all parts and any debris
- 2) Inspect for any debilitating damage
- 3) Recover to regular outage activities
- 4) Preserve evidence for establishment of apparent cause
- 5) Complete any necessary repairs



State Change History

Initiate  
 AR Pre-Screen  
 by KENDALL, THOMAS 4/22/2004 1:16:55 AM  
 Owner (None)

Section 1

Activity Request Id: CAP055951  
 Activity Type: CAP Submit Date: 4/22/2004 1:16:55 AM

One Line Description: Incore Thermocouple guide ("bullet nose") inadvertently lifted with Rx head

Detailed Description: 4/22/2004 1:16:55 AM - KENDALL, THOMAS:  
 When the Unit 1 reactor head was lifted, one incore thermocouple guide ("bullet nose") was inadvertently lifted along with the head. The penetration was the one containing thermocouple group "C". This left the thermocouple connections exposed, and prevents cavity flood up, upper internals lift, etc.

Initiator: KENDALL, THOMAS Initiator Department: EP Engineering Programs  
  PB

Date/Time of Discovery: 4/21/2004 3:50:00 PM Date/Time of Occurrence: 4/21/2004 3:50:00 PM

Identified By: Site-identified System: RC PB

Equipment # (1st): (None) Equipment Type (1st): (None)

Equipment # (2nd): (None) Equipment Type (2nd): (None)

Equipment # (3rd): (None) Equipment Type (3rd): (None)

Site/Unit: Point Beach - Unit 1

Why did this occur?: 4/22/2004 1:16:55 AM - KENDALL, THOMAS:  
 A white rag used as a temporary foreign material exclusion barrier while preparing the thermocouple penetration ("conoseal") for the head lift was inadvertently left in place. Subsequent investigation found the rag still in place along with a piece of green tape that had been applied to hold it during head lift preparations. The rag had jammed in the annulus between the T/C bullet nose guide and the head penetration, and caused the guide to be lifted with the head instead of slipping through it and remaining on the upper internals.

It has not been determined how or why the rag was left in place. Two other conoseal assemblies were apparently protected in the same manner, but the rags appropriately removed prior to the head lift.

It was reported that initial statements were provided to T. Guay for further evaluation.

Immediate Action Taken: 4/22/2004 1:16:55 AM - KENDALL, THOMAS:  
 Work was stopped, and OCC convened a team to investigate, correct, and recover (electronic copies of charter and other associated documents are attached). As of 0100 on 4/22/04, actions had been completed to verify no loose parts had been generated, and no damage had been done to the head penetration. Further inspections and recovery efforts are in progress.

Recommendations: 4/22/2004 1:16:55 AM - KENDALL, THOMAS:  
 Complete execution of recovery plan. Document final findings via an ACE.

Notify Me During Eval?: N SRO Review Required?: N

Section 2

Operability Status: (None) Compensatory Actions: N

Basis for Operability:

Unplanned TSAC Entry: N External Notification: N

Section 3

Screened?: N Significance Level: (None)

INPO OE Req'd?: N Potential MRFF?: N

QA/Nuclear Oversight?: N Licensing Review?: N

Good Catch/Well Doc'd?: NA

Section 4

Inappropriate Action:

Process: (None) Activity: (None)  
 Human Error Type: (None) Human Perf Fail Mode: (None)  
 Equip Failure Mode: (None) Process Fail Mode: (None)  
 Org/Mgt Failure Mode: (None) Group Causing Prob: (None)  
 Hot Buttons: (None)

Section 5

CAP Admin: PBNP CAP Admin  Prescreener: (None)  
 Project: Corrective Actn Program (CAP) AR  State: AR Pre-Screen  
 Active/Inactive: Active Submitter: KENDALL, THOMAS   
 Owner: (None) Last Modified Date: 4/22/2004 1:16:55 AM  
 Last Modifier: KENDALL, THOMAS  Last State Change Date: 4/22/2004 1:16:55 AM  
 Last State Changer: KENDALL, THOMAS  Close Date:

NUTRK ID:

# of Children: 0

References:

Update:

Prescreen Comments:

Import Memo Field:

OPR Completed?: N

OLD\_ACTION\_NUM:

sub\_tsid: 0 original\_project\_id: 0

original\_issue\_id:

Site: Point Beach

Cartridge and Frame:

POINT BEACH NUCLEAR PLANT  
**WO WORK PLAN REVISION 1**

Copy

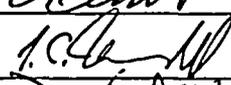
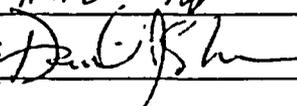
Work Control Document: 0407919  
 Equipment ID: R-1  
 Equipment Description: REACTOR VESSEL AND ASSEMBLY  
 Work Plan Originator: Rick Bryan phone 6678 pager 5616

UNIT: PB 1

Date: April 21, 2004

WORK PLAN REVISION	
<b>REASON for REVISION</b>	To continue with recovery of the stuck bullet nose and facilitate any required repairs. If the retaining clip and O-ring were not found during the inspection in step 2 of the original work plan, additional inspections of the upper internals will be required.
<b>WORK SCOPE and PURPOSE</b>	Continue with inspections for Foreign Material, retrieval of foreign material, Thermocouple stalk inspections, repairs if required and further actions to support the Apparent Cause Investigation.
<b>RISK MANAGEMENT</b>	At any time the man basket is positioned over the exposed vessel, the risk level becomes HIGH. Additional cautions and directions might be required during this time. While tag lines and personnel are stabilizing the man basket, the level of personnel safety increases. Additional safety precautions will be required for this work.
<b>DANGER TAG SCOPE CHANGE?</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No    If yes, what is change?

QUALITY CONTROL		
<b>QC REVIEW OF WORK PLAN</b> (independent QC review required on QA classified work order only) NA if non-QA work order Any change in scope requires WO WP review by QC inspector.	 QC INSP.	4/21/04 Date

TECHNICAL REVIEWS			
<input checked="" type="checkbox"/>	Plant Mgt Rep	Signature:	Date:
<input checked="" type="checkbox"/>	Maintenance	Signature:	Date:
<input checked="" type="checkbox"/>	Operations	Signature: 	Date: 4/22/04
<input checked="" type="checkbox"/>	Engineering	Signature: 	Date: 4/22/04
<input checked="" type="checkbox"/>	Radiation Protection	Signature: 	Date: 4/22/04

POINT BEACH NUCLEAR PLANT  
**WO WORK PLAN REVISION 1**

Work Control Document: 0407919  
 Equipment ID: R-1  
 Equipment Description: REACTOR VESSEL AND ASSEMBLY  
 Work Plan Originator: Rick Bryan phone 6678 pager 5616

UNIT: PB 1

Date: April 21, 2004

Hold Point	Step No	Work Plan Description	Worker	Date
From step 2 of work plan.				
<b>NOTE:</b> During any work in the vicinity of the head, upper internals or bullet, direct RP support and coverage will be required.				
<b>CAUTION:</b> ANY loose items found on the upper internals have the potential to have HIGH dose rate and contamination. DO NOT retrieve any items without RP approval and concurrence.				
	R1-1.	If any loose parts, foreign material of other unidentified items are found on the upper internals THEN an entry into the upper cavity will be required to positively identify and retrieve the loose items. Document below any foreign material found. If foreign material is not on the upper internal plate, this step can be N/A'd.  _____ _____ _____	_____ MT	_____ DATE
	R1-2.	If material retrieval is required, coordinate with RP and other support groups as required to remove the material. If not required this step may be N/A'd.	_____ MT	_____ DATE
	R1-3.	When all foreign material, loose parts and other debris have been removed from the upper internal plate, proceed with step R1.4.	_____ MT	_____ DATE
<b>NOTE:</b> Steps R1.4, R1.5 and R1.6 can be performed concurrently to reduce job duration.				
	R1-4.	Operations to flood the upper cavity to a depth of 2 to 3 feet. This will provide added shielding during man basket inspections.	_____ OPS	_____ DATE
	R1-5.	Perform inspections as required to use the man basket.	_____ MT	_____ DATE
<b>CAUTION:</b> The rope used for tag line SHALL be visible if it falls into the cavity.				
	R1-6.	Personnel using tag lines to stabilize the man basket, locate appropriate places to tie of safety lanyards.	_____ MT	_____ DATE
	R1-7.	When cavity is flooded to the correct level, proceed with work plan.	_____ MT	_____ DATE
<b>CAUTION:</b> EXTREME caution is to be used while stabilizing the man basket with tag lines.				

# WO WORK PLAN REVISION 1

Work Control Document: 0407919  
 Equipment ID: R-1  
 Equipment Description: REACTOR VESSEL AND ASSEMBLY  
 Work Plan Originator: Rick Bryan phone 6678 pager 5616

UNIT: PB 1

Date: April 21, 2004

Hold Point	Step No	Work Plan Description	Worker	Date
	R1-8.	While stabilizing the man basket with tag lines, perform a close inspection of the T/C bundle and associated seals. Use available equipment as required to perform this inspection. Document inspections results below.          Provide this information to engineering for evaluation.	<u>MT</u>	<u>DATE</u>
	R1-9.	DO NOT proceed with any repairs until approval has been given by the on site Management Rep.  _____ Management Rep _____ Date	<u>MT</u>	<u>DATE</u>
<b>NOTE:</b>		If the old bullet nose is deemed acceptable for reuse, it will be installed, otherwise a new bullet nose will be installed.		
	R1-10.	Using the man basket with appropriate safety precautions, install the bullet nose over the T/C bundle. Install new spring clip and O-ring. Indicate below which bullet nose was used.  <input type="checkbox"/> New Bullet Nose <input type="checkbox"/> Old Bullet Nose	<u>MT</u>	<u>DATE</u>
<b>HOUSE KEEPING</b>	R1-11.	Remove all debris, tools, and materials from the area. Ensure all work areas meet PBNP housekeeping expectations.	<u>MT</u>	<u>DATE</u>
	R1-12.	Release the upper internals and head for continued refueling activities.	<u>MT</u>	<u>DATE</u>
	R1-13.	Engineering to determine if further actions are required to support repairs (if needed) and establish the Apparent Cause. Document any further actions below.          	<u>ENG</u>	<u>DATE</u>
	R1-14.	If additional work is required, return package to planning with additional work instructions for incorporation.	<u>MT</u>	<u>DATE</u>
	R1-15.	Return to closeout section of work plan to complete task.	<u>MT</u>	<u>DATE</u>