

***If you are using a printed copy of this procedure, and not the on-screen version, then you MUST make sure the dates at the bottom of the printed copy and the on-screen version match. The on-screen version of the Collider-Accelerator Department Procedure is the Official Version. Hard copies of all signed, official, C-A Operating Procedures are available by contacting the ESSHQ Procedures Coordinator, Bldg. 911A***

**C-A OPERATIONS PROCEDURES MANUAL**

**ATTACHMENT**

**4.120.22.f AGS Chipmunk Tests**

C-A-OPM Procedures in which this Attachment is used.		
4.120.22		

Hand Processed Changes

<u>HPC No.</u>	<u>Date</u>	<u>Page Nos.</u>	<u>Initials</u>
_____	_____	_____	_____
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Approved: \_\_\_\_\_ *Signature on File* \_\_\_\_\_  
 Collider-Accelerator Department Chairman Date

4.120.22.f AGS Chipmunk Tests

PASS ANNUAL ACCEPTANCE TEST PROTOCOL

Division A Software Filename and Checksum: Title: \_\_\_\_\_ Checksum: \_\_\_\_\_

Division B Software Filename and Checksum: Title: \_\_\_\_\_ Checksum: \_\_\_\_\_

**Initial testing complete:**

Test Team Leader's Name (Print): \_\_\_\_\_ Life Number: \_\_\_\_\_

Test Team Leader's Name (Sign): \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

**Acceptance test procedure complete (following repairs and retesting if required):**

Test Team Leader's Name (Print): \_\_\_\_\_ Life Number: \_\_\_\_\_

Test Team Leader's Name (Sign): \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

**Test results reviewed by:**

Safety Section Head's Name (Print): \_\_\_\_\_ Life Number: \_\_\_\_\_

Safety Section Head's Name (Sign): \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

**Test results accepted by Radiation Safety Committee:**

RSC Member's Name (Print): \_\_\_\_\_ Life Number: \_\_\_\_\_

RSC Member's Name (Sign): \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

### 1.1 Test of Chipmunk NMO 46 located in 913 D Fan House

- |                          |  |   |                 |
|--------------------------|--|---|-----------------|
| <input type="checkbox"/> | <b>VERIFY</b>  | Chipmunk calibration date [ ____/____/____ ] is             | <b>VALID</b>    |
| <input type="checkbox"/> | <b>VERIFY</b>  | Chipmunk is in good physical condition and is               | <b>CHIRPING</b> |
|                          | <b>DISCON</b>  | <b>NMO 46 from Security interface box for failsafe test</b> |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees at <b>Opto monitor</b> NMO 46                      | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>   | <b>NMO 46 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees NMO 46   | <b>OK</b>       |
|                          | <b>PRESS</b>   | <b>Trip button</b> on chipmunk NMO 46                       |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees at Opto monitor NMO 46                             | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>   | <b>NMO 46 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees NMO 46   | <b>OK</b>       |
| <input type="checkbox"/> | <b>Check for acceptance of Test Chipmunk NMO 46 located in 913 D Fan House</b> |   |                 |

### 1.2 Test of Chipmunk NMO 57 located in 913 C Fan House

- |                          |  |   |                 |
|--------------------------|--|---|-----------------|
| <input type="checkbox"/> | <b>VERIFY</b>  | Chipmunk calibration date [ ____/____/____ ] is             | <b>VALID</b>    |
| <input type="checkbox"/> | <b>VERIFY</b>  | Chipmunk is in good physical condition and is               | <b>CHIRPING</b> |
|                          | <b>DISCON</b>  | <b>NMO 57 from Security interface box for failsafe test</b> |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees at <b>Opto monitor</b> NMO 57                      | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>   | <b>NMO 57 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees NMO 57   | <b>OK</b>       |
|                          | <b>PRESS</b>   | <b>Trip button</b> on chipmunk NMO 57                       |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees at Opto monitor NMO 57                             | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>   | <b>NMO 57 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees NMO 57   | <b>OK</b>       |
| <input type="checkbox"/> | <b>Check for acceptance of Test Chipmunk NMO 57 located in 913 C Fan House</b> |   |                 |

### 1.3 Test of Chipmunk NMO 56 located in 913 B Fan House

- |                          |  |   |                 |
|--------------------------|--|---|-----------------|
| <input type="checkbox"/> | <b>VERIFY</b>  | Chipmunk calibration date [ ____/____/____ ] is             | <b>VALID</b>    |
| <input type="checkbox"/> | <b>VERIFY</b>  | Chipmunk is in good physical condition and is               | <b>CHIRPING</b> |
|                          | <b>DISCON</b>  | <b>NMO 56 from Security interface box for failsafe test</b> |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees at <b>Opto monitor</b> NMO 56                      | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>   | <b>NMO 56 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees NMO 56   | <b>OK</b>       |
|                          | <b>PRESS</b>   | <b>Trip button</b> on chipmunk NMO 56                       |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees at Opto monitor NMO 56                             | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>   | <b>NMO 56 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees NMO 56   | <b>OK</b>       |
| <input type="checkbox"/> | <b>Check for acceptance of Test Chipmunk NMO 56 located in 913 B Fan House</b> |   |                 |

**1.4 Test of Chipmunk NMO 54 located on Siemens Rd West**

- |                          |  |   |                 |
|--------------------------|--|---|-----------------|
| <input type="checkbox"/> | <b>VERIFY</b>  | Chipmunk calibration date [ ____/____/____ ] is             | <b>VALID</b>    |
| <input type="checkbox"/> | <b>VERIFY</b>  | Chipmunk is in good physical condition and is               | <b>CHIRPING</b> |
|                          | <b>DISCON</b>  | <b>NMO 54 from Security interface box for failsafe test</b> |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees at <b>Opto monitor NMO 54</b>                      | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>   | <b>NMO 54 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees NMO 54   | <b>OK</b>       |
|                          | <b>PRESS</b>   | <b>Trip button on chipmunk NMO 54</b>                       |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees at Opto monitor NMO 54                             | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>   | <b>NMO 54 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees NMO 54   | <b>OK</b>       |
| <input type="checkbox"/> | <b>Check for acceptance of Test Chipmunk NMO 54 located on Siemens Rd West</b> |   |                 |

**1.5 Test of Chipmunk NMO 55 located on Siemens Rd East**

- |                          |  |   |                 |
|--------------------------|--|---|-----------------|
| <input type="checkbox"/> | <b>VERIFY</b>  | Chipmunk calibration date [ ____/____/____ ] is             | <b>VALID</b>    |
| <input type="checkbox"/> | <b>VERIFY</b>  | Chipmunk is in good physical condition and is               | <b>CHIRPING</b> |
|                          | <b>DISCON</b>  | <b>NMO 55 from Security interface box for failsafe test</b> |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees at <b>Opto monitor NMO 55</b>                      | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>   | <b>NMO 55 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees NMO 55   | <b>OK</b>       |
|                          | <b>PRESS</b>   | <b>Trip button on chipmunk NMO 55</b>                       |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees at Opto monitor NMO 55                             | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>   | <b>NMO 55 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees NMO 55   | <b>OK</b>       |
| <input type="checkbox"/> | <b>Check for acceptance of Test Chipmunk NMO 55 located on Siemens Rd East</b> |   |                 |

**1.6 Test of Chipmunk NMO 51 located at FEB Gate 2 East**

- |                          |  |   |                 |
|--------------------------|--|---|-----------------|
| <input type="checkbox"/> | <b>VERIFY</b>  | Chipmunk calibration date [ ____/____/____ ] is             | <b>VALID</b>    |
| <input type="checkbox"/> | <b>VERIFY</b>  | Chipmunk is in good physical condition and is               | <b>CHIRPING</b> |
|                          | <b>DISCON</b>  | <b>NMO 51 from Security interface box for failsafe test</b> |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees at <b>Opto monitor NMO 51</b>                      | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>   | <b>NMO 51 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees NMO 51   | <b>OK</b>       |
|                          | <b>PRESS</b>   | <b>Trip button on chipmunk NMO 51</b>                       |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees at Opto monitor NMO 51                             | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>   | <b>NMO 51 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees NMO 51   | <b>OK</b>       |
| <input type="checkbox"/> | <b>Check for acceptance of Test Chipmunk NMO 51 located at FEB Gate 2 East</b> |   |                 |

**1.7 Test of Chipmunk NMO 78 located at FEB Gate 2 West**

- |                          |   |   |                 |
|--------------------------|---|---|-----------------|
| <input type="checkbox"/> | <b>VERIFY</b>   | Chipmunk calibration date [ ____/____/____ ] is             | <b>VALID</b>    |
| <input type="checkbox"/> | <b>VERIFY</b>   | Chipmunk is in good physical condition and is               | <b>CHIRPING</b> |
|                          | <b>DISCON</b>   | <b>NMO 78 from Security interface box for failsafe test</b> |                 |
| <input type="checkbox"/> | <b>VERIFY</b>   | MCR sees at <b>Opto monitor NMO 78</b>                      | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>  | <b>NMO 78 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>   | MCR sees NMO 78   | <b>OK</b>       |
|                          | <b>PRESS</b>  | <b>Trip button on chipmunk NMO 78</b>                       |                 |
| <input type="checkbox"/> | <b>VERIFY</b>   | MCR sees at Opto monitor NMO 78                             | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>  | <b>NMO 78 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>   | MCR sees NMO 78   | <b>OK</b>       |
| <input type="checkbox"/> | <b>Check for acceptance of Test Chipmunk NMO 78 located FEB Gate 2 West</b> |   |                 |

**1.8 Test of Chipmunk NMO 22 located at North Shield Door**

- |                          |  |   |                 |
|--------------------------|--|---|-----------------|
| <input type="checkbox"/> | <b>VERIFY</b>  | Chipmunk calibration date [ ____/____/____ ] is             | <b>VALID</b>    |
| <input type="checkbox"/> | <b>VERIFY</b>  | Chipmunk is in good physical condition and is               | <b>CHIRPING</b> |
|                          | <b>DISCON</b>  | <b>NMO 22 from Security interface box for failsafe test</b> |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees at <b>Opto monitor NMO 22</b>                      | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>   | <b>NMO 22 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees NMO 22   | <b>OK</b>       |
|                          | <b>PRESS</b>   | <b>Trip button on chipmunk NMO 22</b>                       |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees at Opto monitor NMO 22                             | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>   | <b>NMO 22 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees NMO 22   | <b>OK</b>       |
| <input type="checkbox"/> | <b>Check for acceptance of Test Chipmunk NMO 22 located at North Shield Door</b> |   |                 |

**1.9 Test of Chipmunk NMO 48 located at South Shield Door**

- |                          |  |   |                 |
|--------------------------|--|---|-----------------|
| <input type="checkbox"/> | <b>VERIFY</b>  | Chipmunk calibration date [ ____/____/____ ] is             | <b>VALID</b>    |
| <input type="checkbox"/> | <b>VERIFY</b>  | Chipmunk is in good physical condition and is               | <b>CHIRPING</b> |
|                          | <b>DISCON</b>  | <b>NMO 48 from Security interface box for failsafe test</b> |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees at <b>Opto monitor NMO 48</b>                      | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>   | <b>NMO 48 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees NMO 48   | <b>OK</b>       |
|                          | <b>PRESS</b>   | <b>Trip button on chipmunk NMO 48</b>                       |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees at Opto monitor NMO 48                             | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>   | <b>NMO 48 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees NMO 48   | <b>OK</b>       |
| <input type="checkbox"/> | <b>Check for acceptance of Test Chipmunk NMO 48 located at South Shield Door</b> |   |                 |

**1.10 Test of Chipmunk NMO 31 located in South Wiring Tunnel**

- |                          |  |   |                 |
|--------------------------|--|---|-----------------|
| <input type="checkbox"/> | <b>VERIFY</b>  | Chipmunk calibration date [ ____/____/____ ] is             | <b>VALID</b>    |
| <input type="checkbox"/> | <b>VERIFY</b>  | Chipmunk is in good physical condition and is               | <b>CHIRPING</b> |
|                          | <b>DISCON</b>  | <b>NMO 31 from Security interface box for failsafe test</b> |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees at <b>Opto monitor NMO 31</b>                      | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>   | <b>NMO 31 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees NMO 31   | <b>OK</b>       |
|                          | <b>PRESS</b>   | <b>Trip button on chipmunk NMO 31</b>                       |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees at Opto monitor NMO 31                             | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>   | <b>NMO 31 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | MCR sees NMO 31   | <b>OK</b>       |
| <input type="checkbox"/> | <b>Check for acceptance of Test Chipmunk NMO 31 located in South Wiring Tunnel</b> |   |                 |

**1.11 Test of Chipmunk NMO 19 located in Target Building East**

- |                          |   |   |                 |
|--------------------------|---|---|-----------------|
| <input type="checkbox"/> | <b>VERIFY</b>   | Chipmunk calibration date [ ____/____/____ ] is             | <b>VALID</b>    |
| <input type="checkbox"/> | <b>VERIFY</b>   | Chipmunk is in good physical condition and is               | <b>CHIRPING</b> |
|                          | <b>DISCON</b>   | <b>NMO 19 from Security interface box for failsafe test</b> |                 |
| <input type="checkbox"/> | <b>VERIFY</b>   | MCR sees at <b>Opto monitor NMO 19</b>                      | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>  | <b>NMO 19 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>   | MCR sees NMO 19   | <b>OK</b>       |
|                          | <b>PRESS</b>  | <b>Trip button on chipmunk NMO 19</b>                       |                 |
| <input type="checkbox"/> | <b>VERIFY</b>   | MCR sees at Opto monitor NMO 19                             | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>  | <b>NMO 19 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>   | MCR sees NMO 19   | <b>OK</b>       |
| <input type="checkbox"/> | <b>Check for acceptance of Test Chipmunk NMO 19 located in Target Building East</b> |   |                 |

**1.12 Test of Chipmunk NMO 49 located at North Conjunction Gate**

- |                          |   |   |                 |
|--------------------------|---|---|-----------------|
| <input type="checkbox"/> | <b>VERIFY</b>   | Chipmunk calibration date [ ____/____/____ ] is             | <b>VALID</b>    |
| <input type="checkbox"/> | <b>VERIFY</b>   | Chipmunk is in good physical condition and is               | <b>CHIRPING</b> |
|                          | <b>DISCON</b>   | <b>NMO 49 from Security interface box for failsafe test</b> |                 |
| <input type="checkbox"/> | <b>VERIFY</b>   | MCR sees at <b>Opto monitor NMO 49</b>                      | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>  | <b>NMO 49 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>   | MCR sees NMO 49   | <b>OK</b>       |
|                          | <b>PRESS</b>  | <b>Trip button on chipmunk NMO 49</b>                       |                 |
| <input type="checkbox"/> | <b>VERIFY</b>   | MCR sees at Opto monitor NMO 49                             | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>  | <b>NMO 49 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>   | MCR sees NMO 49   | <b>OK</b>       |
| <input type="checkbox"/> | <b>Check for acceptance of Test Chipmunk NMO 49 located at North Conjunction Gate</b> |   |                 |

**1.13 Test of Chipmunk NMO 77 located outside North Conjunction Gate**

- |                          |  |   |                 |
|--------------------------|--|---|-----------------|
| <input type="checkbox"/> | <b>VERIFY</b>  | Chipmunk calibration date [ ____/____/____ ] is             | <b>VALID</b>    |
| <input type="checkbox"/> | <b>VERIFY</b>  | Chipmunk is in good physical condition and is               | <b>CHIRPING</b> |
|                          |  |   |                 |
| <input type="checkbox"/> | <b>DISCON</b>  | <b>NMO 77 from Security interface box for failsafe test</b> |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | <b>MCR sees at Opto monitor NMO 77</b>                      | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>   | <b>NMO 77 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | <b>MCR sees NMO 77</b>                                      | <b>OK</b>       |
|                          |  |   |                 |
|                          | <b>PRESS</b>   | <b>Trip button on chipmunk NMO 77</b>                       |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | <b>MCR sees at Opto monitor NMO 77</b>                      | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>   | <b>NMO 77 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | <b>MCR sees NMO 77</b>                                      | <b>OK</b>       |
| <input type="checkbox"/> | <b>Check for acceptance of Test Chipmunk NMO 77 located outside North Conjunction Gate</b> |   |                 |

**END OF TEST PROCEDURE**

**TTL: Sign for completion of initial testing:** \_\_\_\_\_

**Date:** \_\_\_\_/\_\_\_\_/\_\_\_\_

**TTL: Sign for completion of final testing:** \_\_\_\_\_

**Date:** \_\_\_\_/\_\_\_\_/\_\_\_\_