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 kept on file in the C-A ESHQ Training Office, Bldg. 911A.

ATTACHMENT

7.1.13.a Refrigerator Scrub Valve Lineup

C-A-OPM Procedures in which this Attachment is used.		
7.1.13		

Hand Processed Changes

HPC No.	Date	Page Nos.	Initials
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Approved: _____***Signature on File***_____ _____
Collider-Accelerator Department Chairman Date

D. Lederle

1. In the Refigerator, the following valves shall be CLOSED.

Process Valves:

H4M	H339A	H771A
H9A	H352A	H785A
H15A	H354A	H790A
H25A	H357A	H799M
H34M	H385A	H802A
H74A	H390A	H813M
H78A	H399M	H822M
H87M	H402A	H825M
H88M	H413M	H826M
H89M	H425M	H849A
H122M	H426M	H864A
H125M	H437A	H1103A
H144M	H449A	H1107M
H146A	H464A	H4644A
H147A	H714A	H4658A
H157M	H728A	H4659M
H167M	H730A	H9080M
H171M	H739A	H9933M
H187M	H752A	H9934M
H328A	H754A	H9931M
H330A	H757A	

Instrumentation Valves:

H35M	H223M	H712M
H41M	H229M	H725M
H64M	H233M	H748M
H71M	H312M	H765M
H91M	H325M	H782M
H126M	H348M	H892M
H145M	H365M	H9084M
H175M	H382M	H9085M
H211M	H434M	H9086M
H214M	H438M	H9096M
H220M	H452M	

Valves Used for Regeneration/Pure Helium:

H3M	H429M	H9105M
H49M	H430M	H9106M
H57M	H431M	H9107M
H61M	H432M	H9108M
H139M	H433M	H9109M
H163M	H440M	H9110M
H174M	H447M	H9111M
H225M	H696M	H9113M
H236M	H700M	H9114M
H237M	H703M	H9115M
H239M	H705M	H9117M
H243M	H706M	H9118M
H265M	H718M	H9120M
H266M	H720M	H9127M
H267M	H722M	H9133M
H270P	H773M	H9141M
H274M	H777M	H9147M
H305M	H778M	H9153M
H306M	H793M	H9163M
H318M	H795M	H9166M
H320M	H812M	H9167M
H322M	H814M	H9169M
H373M	H817M	H9172M
H377M	H818M	H9173M
H378M	H819M	H9175M
H393M	H847M	H9178M
H395M	H897M	H9182M
H405M	H898M	H9186M
H407M	H9088M	H9190M
H412M	H9089M	PR9166M
H414M	H9091M	PR9169M
H415M	H9092M	PR9172M
H417M	H9100M	PR9175M
H418M	H9101M	PR9178M
H419M	H9102M	PR9182M
H423M	H9103M	PR9186M
H428M	H9104M	PR9190M

Valves to atmosphere, relief valve header, or vacuum:

H44M	H448M	H9128M
H85M	H455M	H9131M
H129M	H456M	H9138M
H138M	H457M	H9142M
H143M	H695M	H9145M
H179M	H699M	H9151M
H180M	H719M	H9154M
H181M	H721M	H9160M
H183M	H723M	H9164M
H184M	H747M	H9168M
H185M	H766M	H9170M
H186M	H767M	H9171M
H188M	H768M	H9174M
H201M	H848M	H9176M
H268M	H855M	H9177M
H269M	H856M	H9180M
H319M	H857M	H9184M
H321M	H899M	H9188M
H323M	H1102A	H9192M
H347M	H1109A	H9194M
H366M	H9090M	H9195M
H367M	H9093M	H9198M
H368M	H9099M	H9199M
H400M	H9116M	H9200M
H403M	H9119M	V263M
H427M	H9121M	
H441M	H9124M	

2. In the refrigerator, the following valves shall be OPEN:

Process Valves:

H5M	H313M	H744A
H26A	H314A	H746M
H33A	H315M	H760M
H38A	H316M	H762A
H40A	H317M	H776M
H54A	H324M	H780A
H58A	H338M	H797M
H69M	H341M	H798M
H82M	H344A	H806M
H83M	H346M	H809M
H86A	H360M	H810M
H90A	H362A	H827M
H95A	H371A	H1100A
H100M	H376M	H1104M
H106A	H380A	H4643A
H114A	H397M	H9122M
H123A	H398M	H9125M
H130M	H406M	H9130M
H131A	H409M	H9132M
H153A	H410M	H9136M
H156M	H422M	H9139M
H158M	H450M	H9144M
H159A	H713M	H9146M
H166M	H715M	H9150M
H168M	H716M	H9152M
H172M	H717M	H9158M
H173A	H724M	H9161M
H200M	H738M	
H238M	H741M	

Instrumentation Valves:

H1M	H45M	H81M
H2M	H53M	H84M
H7M	H63M	H92M
H17M	H65M	H93M
H23M	H66M	H94M
H36M	H70M	H104M
H37M	H72M	H109M
H42M	H73M	H113M
H43M	H80M	H127M

H128M	H408M	H859M
H132M	H421M	H890M
H176M	H435M	H891M
H177M	H436M	H6165M
H182M	H439M	H6166M
H189M	H442M	H6167M
H203M	H443M	H6168M
H212M	H444M	H6169M
H213M	H445M	H6170M
H215M	H451M	H6171M
H216M	H453M	H6172M
H217M	H458M	H6173M
H219M	H459M	H6174M
H221M	H462M	H6175M
H222M	H698M	H6176M
H224M	H726M	H6177M
H230M	H727M	H6178M
H231M	H732M	H9082M
H234M	H737M	H9083M
H235M	H743M	H9087M
H271M	H749M	H9094M
H272M	H750M	H9095M
H273M	H756M	H9097M
H326M	H761M	H9098M
H327M	H770M	H9123M
H332M	H783M	H9126M
H337M	H784M	H9137M
H343M	H789M	H9140M
H349M	H801M	H9159M
H350M	H804M	H9162M
H356M	H808M	H9181M
H361M	H821M	H9185M
H370M	H842M	H9189M
H383M	H843M	H9193M
H384M	H844M	H9196M
H389M	H845M	H9197M
H401M	H851M	
H404M	H858M	

3. At the RHIC helium gas storage farm, gas storage shall be configured to provide make-up gas for the utility compressor and allow for pump-back if necessary. The number of gas tanks set-up will be dependent upon the gas pressure in each tank. The shift supervisor shall decide the configuration of gas storage based on conditions at the time scrubbing of the ring is to be performed. For valve information at the gas storage farm, see drawing 3A995078.

4. In the compressor room, the following valves shall be CLOSED:

H2853M	H3026A	H3049M
H2854M	H3031A	H3063M
H3008M	H3036M	H3066M
H3009M	H3039M	H3067A
H3013M	H3041A	
H3016A	H3043A	

5. In the compressor room, the following valves shall be OPEN:

H2782M	H3022M	H3038M
H2852M	H3027A	H3068A
H3001M	H3032M	
H3010M	H3037M	