

ES and H PROJECT ADS

12/27/2001

ADS #: A99D0068

TYPE: ESH

AGS RING ROOF REPAIRS

WHEN REVISING ADS - ATTACH ADDITIONAL SHEETS AS REQUIRED !!

PROJECT CHAMPION: **EXT**
RESPONSIBLE_DEPT: **MAIL:** **EMAIL:**
DOE_MGR: **PHONE:**

PROJECT DESCRIPTION:

Summary: This project would seal leaks in the C-A complex including the roof of the AGS ring and joints in the RHIC tunnel. The AGS structure is forty years old and rainwater penetrates at several expansion joints and through small cracks occurring mainly at embedded unistrut locations. The RHIC tunnel is experiencing leakage at the wall to floor interface which is caused by a perched water condition not anticipated in the design. Rainwater impinging on the magnets could cause electrical failures and potential loss of control for the beam. Water can also turn to tritium, causing possible environmental problems and disposal costs. Further leakage will ultimately damage reinforcing bars and create structural problems. Leakage, expansion joint problems, and cracks at bolts and rebars were identified during a building manager inspection.

PROJECT APPRAISAL / JUSTIFICATION:

Benefits

- Avoid potential electrical, environmental, and safety problems.
- Reduce waste and associated disposal costs.
- Prevent structural damage.

Impacts

- Possible environmental and safety problems from water impinging on magnets.
- Continued structural deterioration.

Mitigating Measures

- Gutters have been installed under leaking joints to divert water away from magnets.
- Monitoring wells have been installed at RHIC to track groundwater levels.

GENERAL INFORMATION:

RPM SCORING:

Before Score - After Score + Mgmt Adjustment = Total Score

28

0

50

78

BIN: 2

BEFORE SCORE

AFTER SCORE

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	Consequence	Multiplier	Probability	= Score
Public S and H	30	1.00	0.0001	0
Site S and H	100	1.00	0.1000	10
Compliance	1	1.00	1.0000	1
Mission	150	1.00	0.1000	15
Cost-Effective	15	1.00	0.0001	0
Environmental	20	1.00	0.1000	2

	Consequence	Multiplier	Probability	= Score
	30	1	0.0001	0
	10	1	0.0001	0
	1	1	0.0001	0
	75	1	0.0001	0
	15	1	0.0001	0
	20	1	0.0001	0

FUNDING:

ACCOUNT#:

ASSET_NO:

COST_NOTES:

\$275K (Estimate based on vendor quotes to repair 1000 L.F. of AGS ring joints and 575 L.F. of RHIC joints. Exact amount of joints requiring repair needs to be verified. Estimate includes engineering, project management, and burden.)

Profile In Thousands

	PY	FY99	FY00	FY01	FY02	FY03	UNFUNDED	TEC
<i>Allocation</i>								
<i>Cost</i>							275	275

ESH FUNCTIONAL AREA:

CW01 %: 25 Groundwater Protection Management
 IS01 %: 50 Electrical Safety
 RP06 %: 25 Contamination Control
 %:
 %:
 %:

ESH DRIVER:

Secondary Drivers

Primary Driver