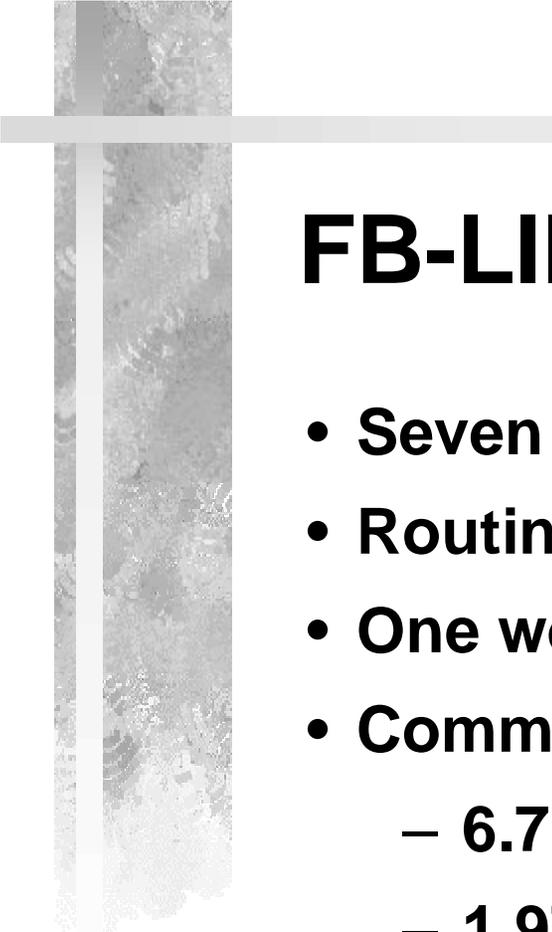




SRS LESSONS LEARNED

Program Improvements from FB-LINE Plutonium Intake Event September 1, 1999

**Steve Etheridge
WSRC
SELLS Workshop
October 17 - 18, 2000** ¹



FB-LINE Plutonium Intake Event

- **Seven workers exposed to airborne radioactivity**
- **Routine operation in vault type room**
- **One worker in vault, 6 in vestibule**
- **Committed Effective Dose Equivalent**
 - **6.719 REM**
 - **1.978 REM**
 - **1.637 REM**
 - **1.542 REM**
- **Retrieval and packaging of bagless transfer cans**
- **Several root causes: bad weld on one can**

FB-LINE Plutonium Intake Event

Conclusions

- **Issues identified for this accident are similar to those identified in the 1997 DOE Type B Accident Investigation report of a plutonium intake by a crane operator at the SRS F-Canyon**
- **Similarities include failure to adequately characterize work site radiological conditions**
- **Inadequate job planning/work package preparation/pre-job briefs/ALARA reviews**

FB-LINE Plutonium Intake Event

Conclusions

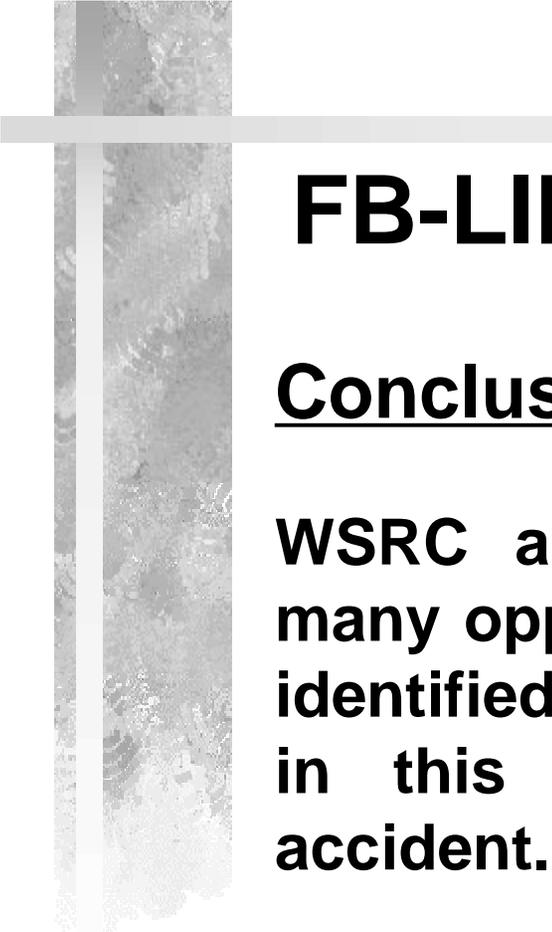
- **Failure to ensure verbatim compliance with procedures**
- **Inadequate specification of who was responsible for the job**
- **Failure to perform adequate Job Hazard Analysis**
- **Inadequate management analysis of operating conditions**

FB-LINE Plutonium Intake Event

Judgments of Need

WSRC Management and DOE-SR line management need to:

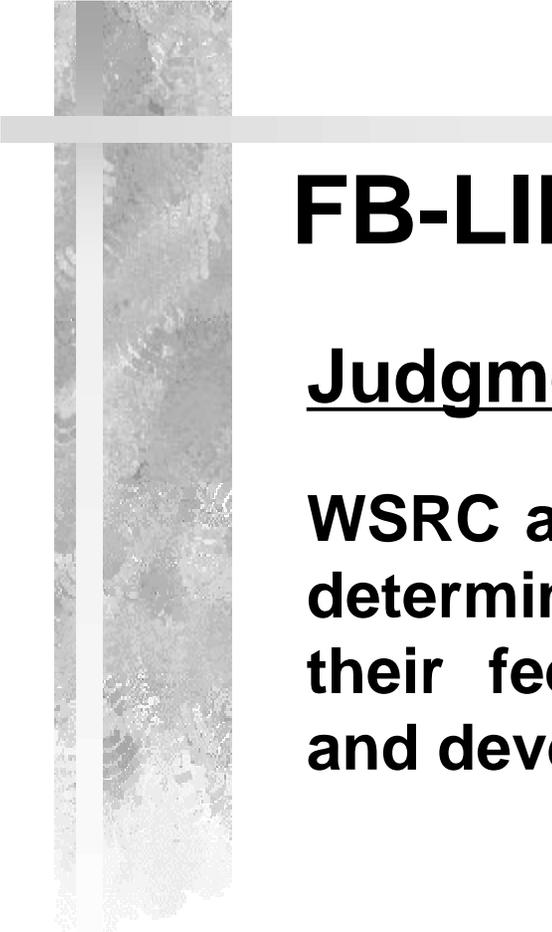
- analyze the adequacy of F-Canyon lessons learned implementation and develop corrective actions**
- validate any corrective actions already implemented by FB-Line as a result of the F-Canyon accident**
- determine why corrective actions taken in response to the F-Canyon accident investigation report were not effective in mitigating the effects of this accident**



FB-LINE Plutonium Intake Event

Conclusions

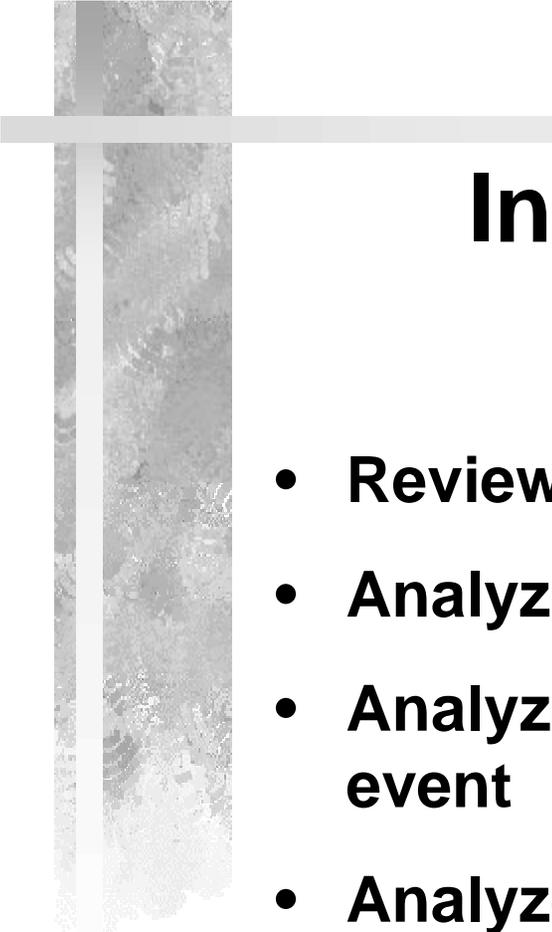
WSRC and DOE-SR have been presented with many opportunities in the past to rectify problems identified either by them or others that resurfaced in this investigation and contributed to the accident.



FB-LINE Plutonium Intake Event

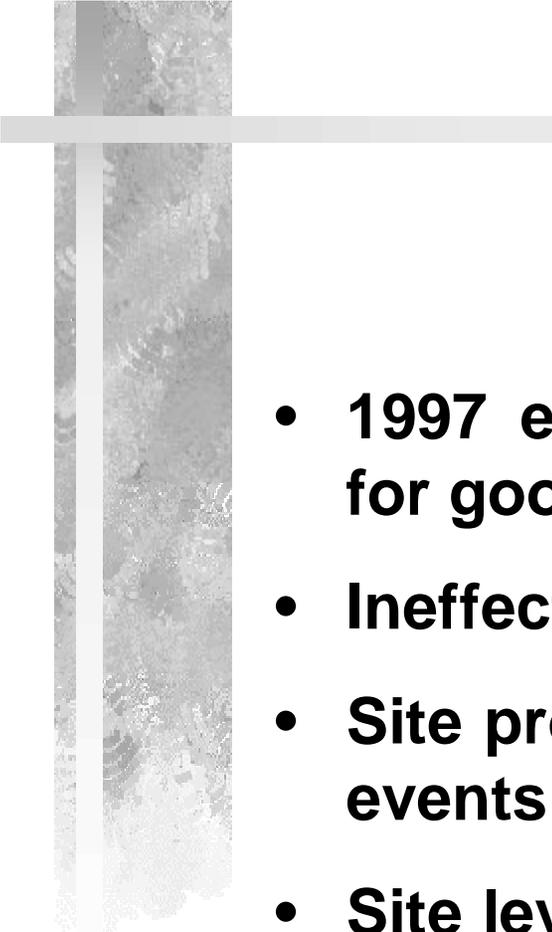
Judgments of Need

WSRC and DOE-SR senior management need to determine the root causes of ineffectiveness in their feedback and improvement mechanisms and develop appropriate corrective actions.



Ineffective Feedback and Improvement

- **Reviewed 1997 event of similar circumstances**
- **Analyzed lessons learned from 1997 event**
- **Analyzed path of lessons learned from 1997 event**
- **Analyzed application of lessons learned from 1997**
- **Analysis focused on programmatic efficiencies and effectiveness, not individual performances**



Results

- **1997 event lessons learned not fully analyzed for good information**
- **Ineffective communication of lessons learned**
- **Site program for communicating Type A/Type B events less than adequate**
- **Site level involvement (Lessons Learned Group) less than appropriate**

Program Improvements

- **Lessons Learned procedure revised to require:**
 - **Prompt facility communication of Lessons Learned for Type A or Type B event (5 days from declaration)**
 - **Timely transmittal of Lessons Learned (10 days from day of declaration)**
 - **Functional Program Manager or Subject Matter Expert review of Lessons Learned**
 - **Timely transmittal of event/lessons learned to complex (Type A or Type B)**
 - **Timely transmission of event/lessons learned locally for “Red Alerts”**
 - **Specific transmission of “Red Alerts” to Senior Management (VPs)**