



**Savannah River
Remediation**

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Z-Area Retention Basin No. 4 and Z-01 Storm Water Outfall



7/10/2013

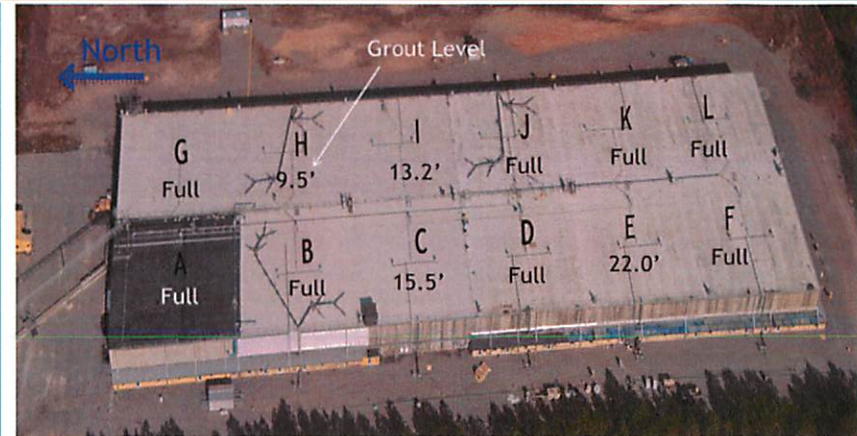
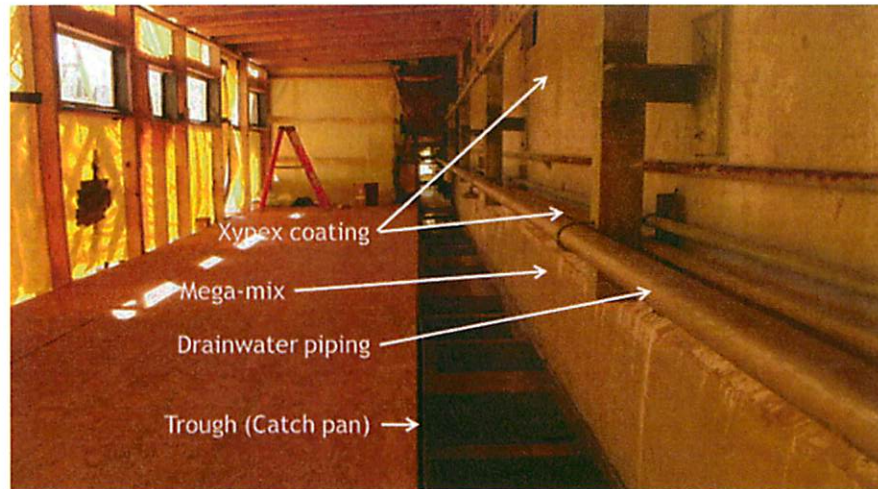
Steve Wilkerson

SRR-WTF-2013-00012

SDF Vault 4, Current Status

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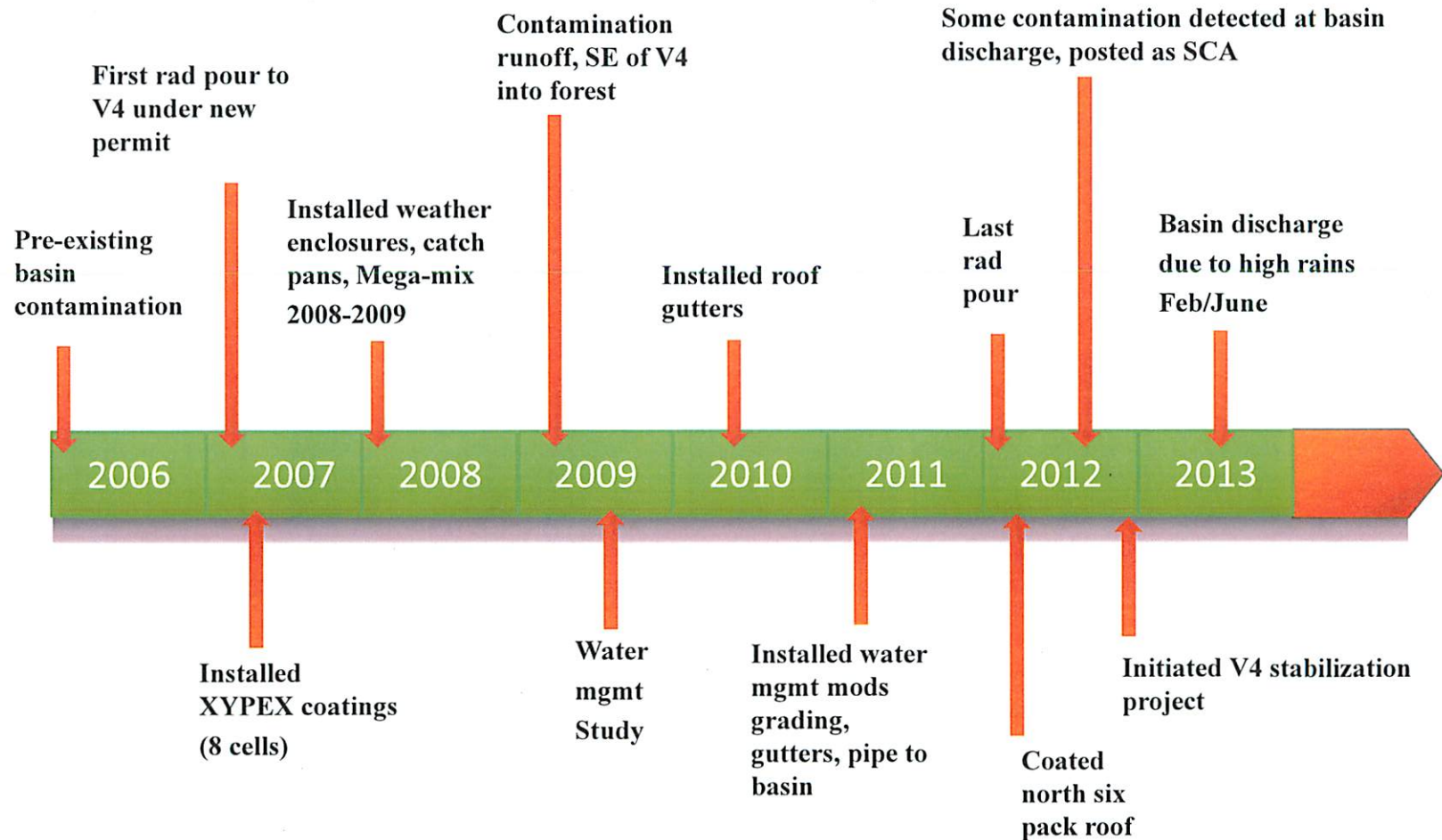
- Vault 4, Cells B, D, F, H, J, K, and L have all attributes required by Solid Waste Landfill Permit (P) and additional attributes installed with notification to SCDHEC (L):
 - Xypex coating on bottom 5 feet of wall (P)
 - Mega-Mix coating on wall to floor interface(L)
 - Drain water collection and return system (P)
 - Rain shelters (L)
 - Troughs (Catch pans)(L)
 - Roof Gutters and downspouts(L)
 - Rain shelter roof upgrades (L)



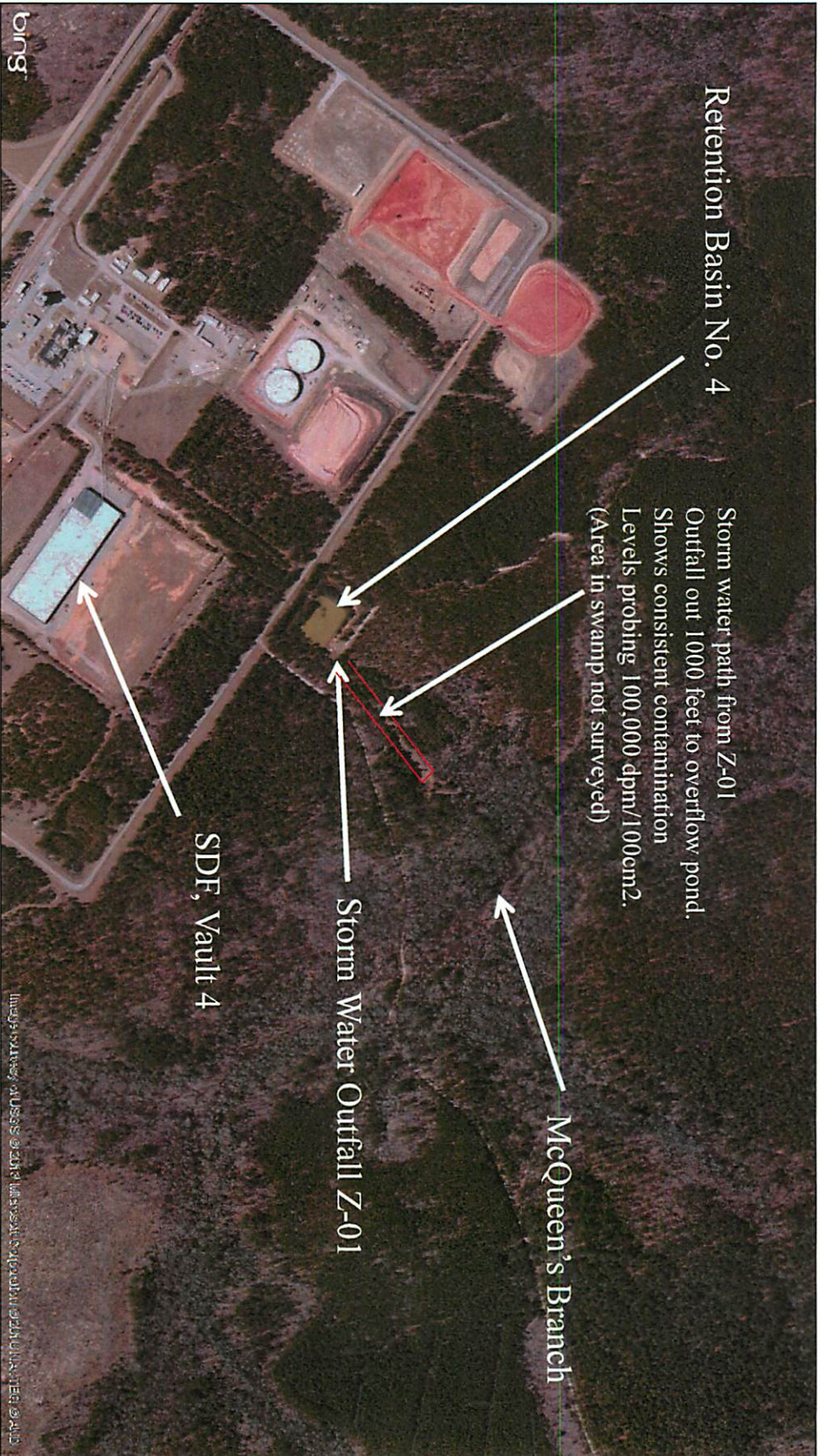
- Vault 4 conditions communicated during routine SCDHEC inspections and other stakeholder (e.g., EPA, DNFSB) visits
- Facility continues to take appropriate actions, consistent with the Solid Waste Landfill Permit and DOE radiological procedures
- Facility continues to monitor radiological conditions and maintain postings in accordance with DOE procedures
- Contingency Plan actions, as required by SDF Permit, continue to be implemented

Saltstone Timeline

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SDF Vault 4, Current Status



Retention Basin No. 4

Storm water path from Z-01
Outfall out 1000 feet to overflow pond.
Shows consistent contamination
Levels probing 100,000 dpm/100cm².
(Area in swamp not surveyed)

McQueen's Branch

Storm Water Outfall Z-01

SDF, Vault 4

bing

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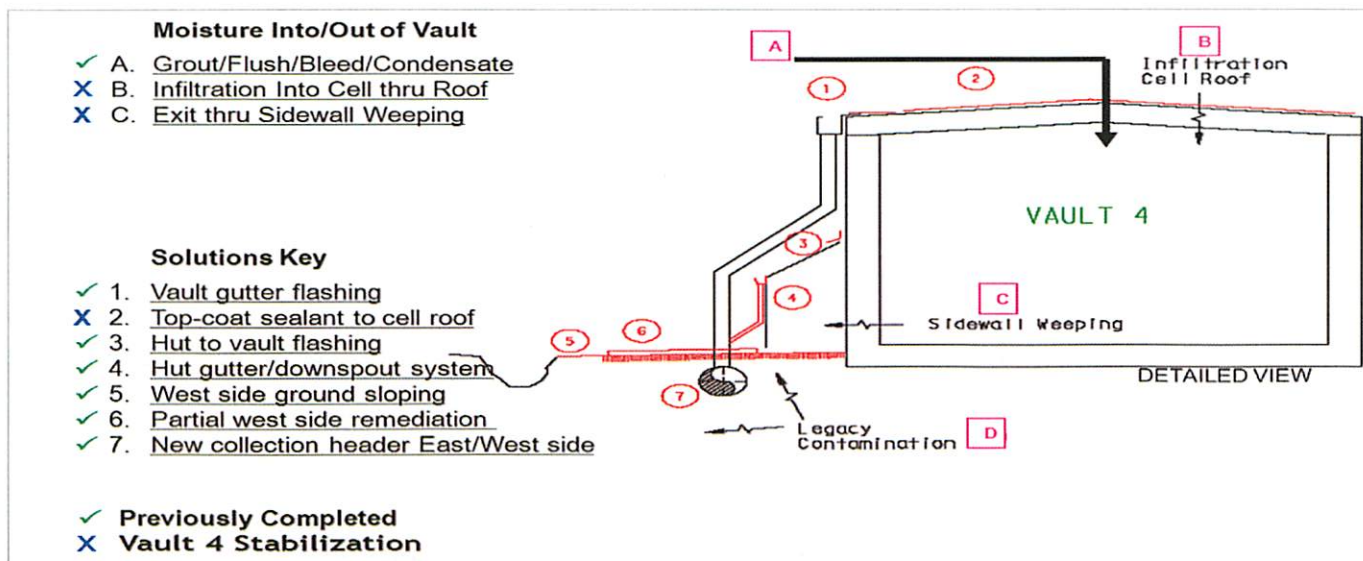
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- Z-Area Retention Basin No. 4 (Z-01 Storm Water Outfall), until recently, has been a no discharge basin
- Recent rains (Nine inches in February 2013 was highest seasonal recorded since 1960) have caused Z-Area Retention Basin No. 4 (Z-01 Storm Water Outfall) to discharge, as designed
- Storm water sampling was conducted for both radiological and non-radiological parameters
- Non-radiological baseline storm water sampling conducted – no abnormal results
- Radiological sample results show low radioactivity concentration in storm water that is monitored in accordance with DOE Orders
- Radioactive effluent sampling equipment has been installed at Z-01 outfall and McQueen’s Branch to monitor radioactive discharge
- Soil Contamination Area has been enhanced with additional postings for personnel protection

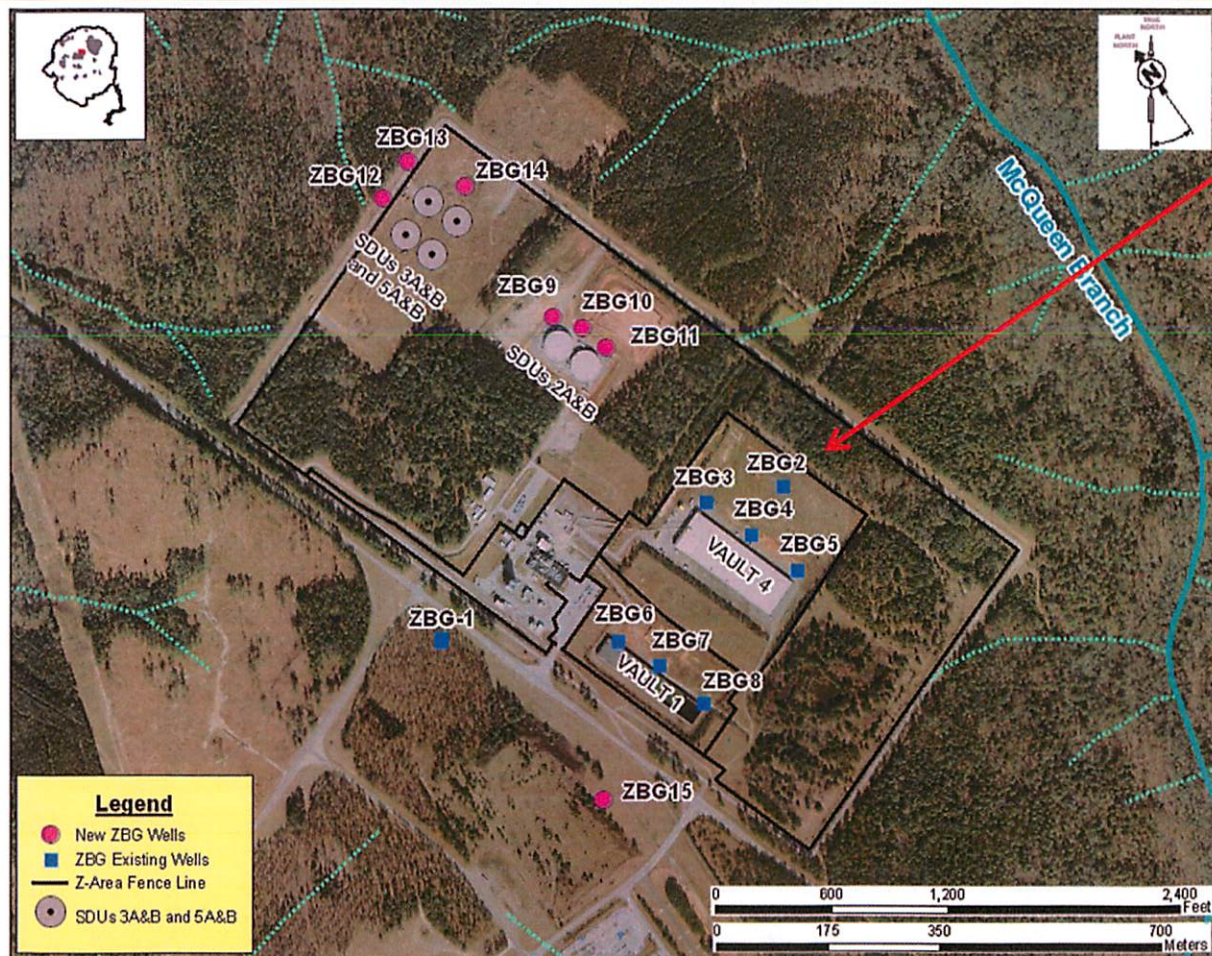


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- Evaluation completed of SDF, Vault 4 modifications that could be implemented to eliminate rain infiltration in order to mitigate worker and environmental risks
- Alternative selected:
 - Pouring the minimum cap to SDF, Vault 4 cells needed for <5 mrem/hr dose rate on SDF, Vault 4 roof for worker protection
 - Installation of elastomeric roof covering on remaining SDF, Vault 4, cells (D, E, F, J, K, L)
 - Continued maintenance on roof and weather enclosures
 - Continue to manage drain water levels



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Well ZBG-2

- 2nd consecutive sampling event where non-volatile Beta has exceeded 8 pCi/L
- Tc-99 levels elevated in recent sampling events
- Sampling and analysis frequency for Tc-99 will be changed from biennial to semi-annual
- Saltstone Groundwater Monitoring Midyear Report for 2013 will be issued to SCDHEC on July 15, 2013

Future Actions

- No current plans to use SDF, Vault 4 per Liquid Waste System Plan, Revision 18
- Continue to take appropriate actions, consistent with the Solid Waste Landfill Permit and DOE radiological procedures
- Implement SDF Vault 4 Stabilization Plan in conjunction with Revision 18 of the LWO System Plan
- Initiate Systems Engineering Evaluation for Z-Area Retention Basin No. 4 and discharge (Z-01 Storm Water Outfall)