



Department of Energy

Ohio Field Office
Fernald Closure Project
175 Tri-County Parkway
Springdale, Ohio 45246
(513) 648-3155

5969



NOV 14 2005

Mr. James A. Saric, Remedial Project Manager
United States Environmental Protection Agency
Region V-SRF-5J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

DOE-0018-06

Mr. Thomas Schneider, Project Manager
Ohio Environmental Protection Agency
Southwest District Office
401 East Fifth Street
Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

TRANSMITTAL OF VARIANCE TO REVISION 2 OF THE OPERATIONS AND MAINTENANCE MASTER PLAN (OMMP) FOR OPERATIONAL PERIOD 5

This letter transmits a Variance to Revision 2 of the Operations and Maintenance Master Plan (OMMP) for the remaining portion of Operational Period 4 and Operational Period 5. The need for, and scope of this variance has been discussed with you and your staff at the September 15, 2005 Technical Integration Exchange (TIE) meeting and during the weekly conference calls.

If you have any questions or require additional information, please contact me at (513) 648-3139.

Sincerely,

Johnny W. Reising
Director



Mr. James A. Saric
Mr. Tom Schneider

-2-

DOE-0018-06

Enclosure:

cc w/enclosure:

G. Jablonowski, USEPA-V, SR-6J
T. Schneider, OEPA-Dayton (3 copies of enclosure)
C. Connell, ATSDR
M. Cullerton, Tetra Tech
M. Shupe, HSI GeoTrans
R. Vandergrift, ODOH

cc w/o enclosure:

Helen E. Bilson, MS 1
J. Chiou, Flour Fernald, MS88
W. Hertel, Flour Fernald, MS12
M. Jewett, Flour Fernald, MS1
F. Johnston, Flour Fernald, MS12
AR Coordinator, Flour Fernald, Inc., MS6

VARIANCE / FIELD CHANGE NOTICE

V/F No. 1 **5969**

PROJECT NO: 2505-OM-001, Final, Revision 2

Page 1 of 6

DOCUMENT NO: 2505-OM-001, Final, Revision 2

Date: 11-08-05

DOCUMENT TITLE: Operations and Maintenance Master Plan for Aquifer Restoration and Wastewater Treatment

VARIANCE / FIELD CHANGE NOTICE (Include justification)

Requirement:

Section 3.3 Treatment Systems

Provides a description of the current treatment systems

Section 5.0 Operations Plans

Provides treatment system operation instructions for Operational periods 3 through 6. Period 4 covers CAWWT operations after SPIT and IAWWT Shutdown until SWRB Shutdown. Operational Period 5 covers CAWWT Operations after SWRB is shutdown until capping of the last cell.

Variance:

Add Silos 1 & 2 Wastewater Treatment facility operational description (Attachment 1) as Section 3.3.5.

Add East SWRB Operational Instructions (Attachment 2) to Section 5.4.3 Operational Period 4.

Add CAWWT Backwash Basin Operational Instructions (Attachment 3) to Section 5.4.4 Operational Period 5.

Justification:

Operational descriptions are needed for Silos 1 & 2 Wastewater Treatment.

The site is currently in Operational Period 4. The Emergency Spill Basin and the West SWRB have been removed from service before the CAWWT Backwash Basin has been constructed. Therefore the East SWRB is still in service and is receiving leachate from the OSDF and storm water/excavation water from the uncertified portions of the FPA and WSA. Operational instructions are needed to cover this operational configuration.

The site will soon be in Operational Period 5. Instructions will be needed for operating the CAWWT backwash basin.

Cathy Glassmeyer

Requested By: Cathy Glassmeyer

Date: 11-08-05

| X-IF REQD | V/FCN APPROVAL | DATE | X-IF REQD | V/FCN APPROVAL | DATE |
|-----------|---|---------|-----------|---|---------|
| X | <small>CERTAIN ASSURANCE</small> <i>R. Schiper</i> | 11-8-05 | X | <small>PROJECT MANAGER</small> <i>William G. North</i> | 11/8/05 |
| | <small>DATA QUALITY MANAGEMENT</small> | | X | <small>FIELD MANAGER</small> <i>Shirley L. Sparker</i> | 11/9/05 |
| | <small>ANALYTICAL CUSTOMER SUPPORT</small> | | | <small>OTHER</small> | |
| | <small>OTHER</small> | | | <small>OTHER</small> | |

REVISION REQUIRED (Document NO. & Title):
 YES NO

DISTRIBUTION: EGDC

ATTACHMENT 1Section 3.3.5: Silos Wastewater Treatment (SWT)

After the material from Silos 1 & 2 that is currently stored in the TTA tanks has been treated through the Waste Treatment and Packaging (WT&P) system, some amount of water will be used to flush all equipment in the WT&P facility in preparation for demolition. This water will be treated through the WT&P clarifier for gross removal of lead, radium and uranium. Lime will be added to the clarifier along with other coagulants and/or flocculants to facilitate precipitation of lead, radium and uranium. The clarifier solids will be processed through the feed tanks and mixers in the same manner as the silos solids. The supernatant will be filtered through cartridge filters in the WT&P facility and then transported by tanker to the new Silos Wastewater Treatment (SWT) process.

The SWT will be located in the existing SPIT facility and will reuse equipment from the SPIT and IAWWT processes. The SWT treatment process will consist of an influent feed tank, pumps, bag and cartridge filters for solids removal, activated carbon for lead removal and ion exchange for radium removal. The effluent from the SWT will be discharged to the existing FCP effluent line in the SWRB Valve House and through the Parshall Flume monitoring point to the Great Miami River.

The ion exchange resin to be used is Dowex RSC manufactured by the Dow Chemical Company. RSC is a radium selective complexer resin designed for radium removal from groundwater.

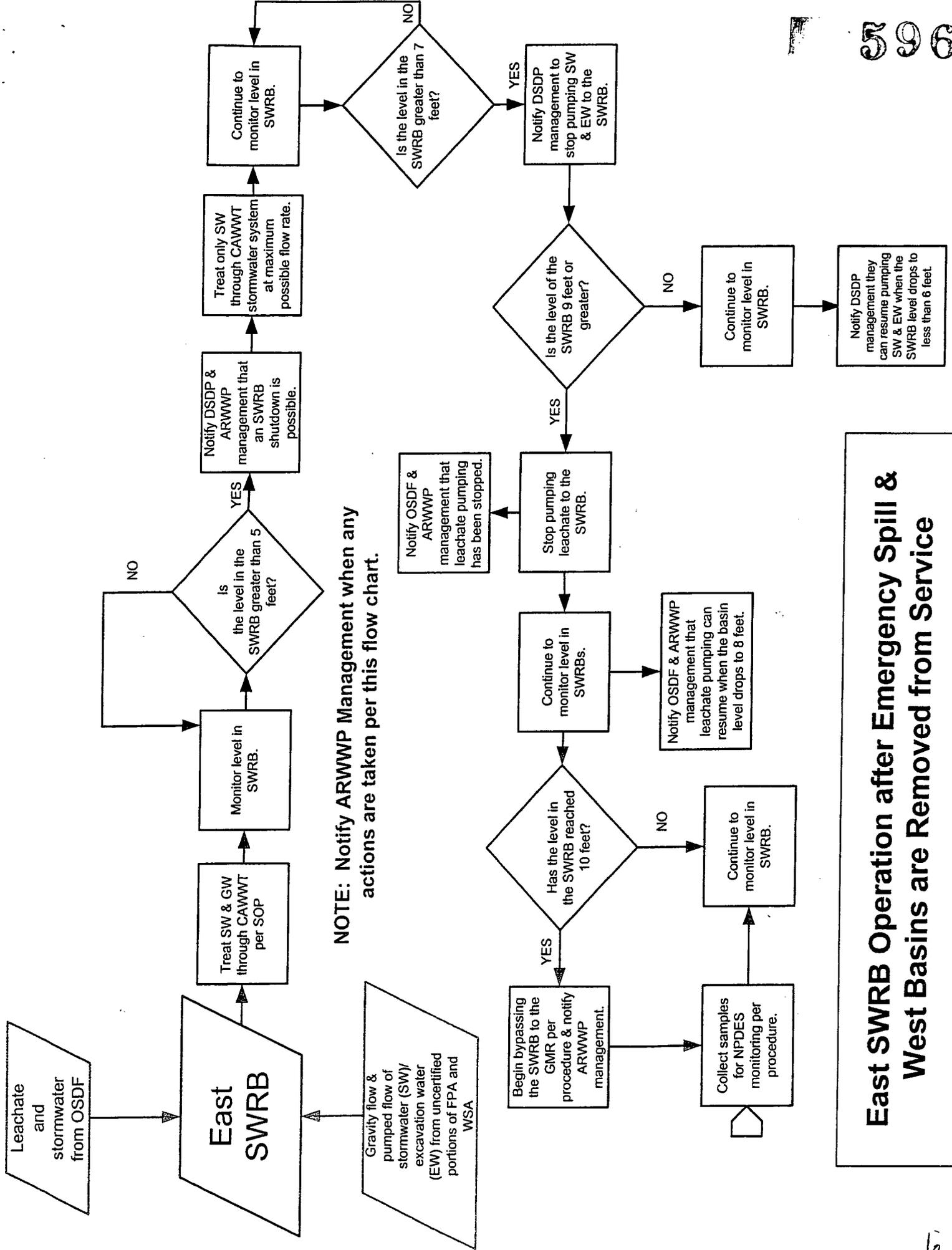
The design flow rate through the SWT is 50 gpm.

ATTACHMENT 2**Operation of the East SWRB**

During the period of time while the East SWRB is in service receiving Leachate from the OSDF and stormwater/excavation water from the uncertified portions of FPA and WSA, the following operational mode will be used:

1. When the level in the East SWRB reaches 5 feet, organizations that are pumping into the East SWRB and ARWWP Management will be notified that a shutdown is possible. The entire capacity of the CAWWT stormwater train will be dedicated to treating water from the East SWRB.
2. When the level reaches 7 feet, DS&DP will be notified to stop pumping into East SWRB and ARWWP Management will be notified.
3. When the level reaches 9 feet, leachate pumping will be stopped and DS&DP and ARWWP Management will be notified.
4. When the level reaches 10 feet, water from the East SWRB will be pumped directly to the Great Miami River bypassing treatment. The CAWWT stormwater system will continue to treat as much stormwater as possible while the excess is being bypassed. Bypassed water will be sampled per the NPDES permit requirements. ARWWP Management will be notified.
5. Bypassing will be stopped when the level drops to 9 feet and ARWWP Management will be notified.
6. Leachate pumping will be resumed when the level drops to 8.5 feet.
7. DS&DP pumping will be resumed when the level drops to less than 6 feet.

A process flow diagram is attached.



NOTE: Notify ARWWP Management when any actions are taken per this flow chart.

East SWRB Operation after Emergency Spill & West Basins are Removed from Service

ATTACHMENT 3

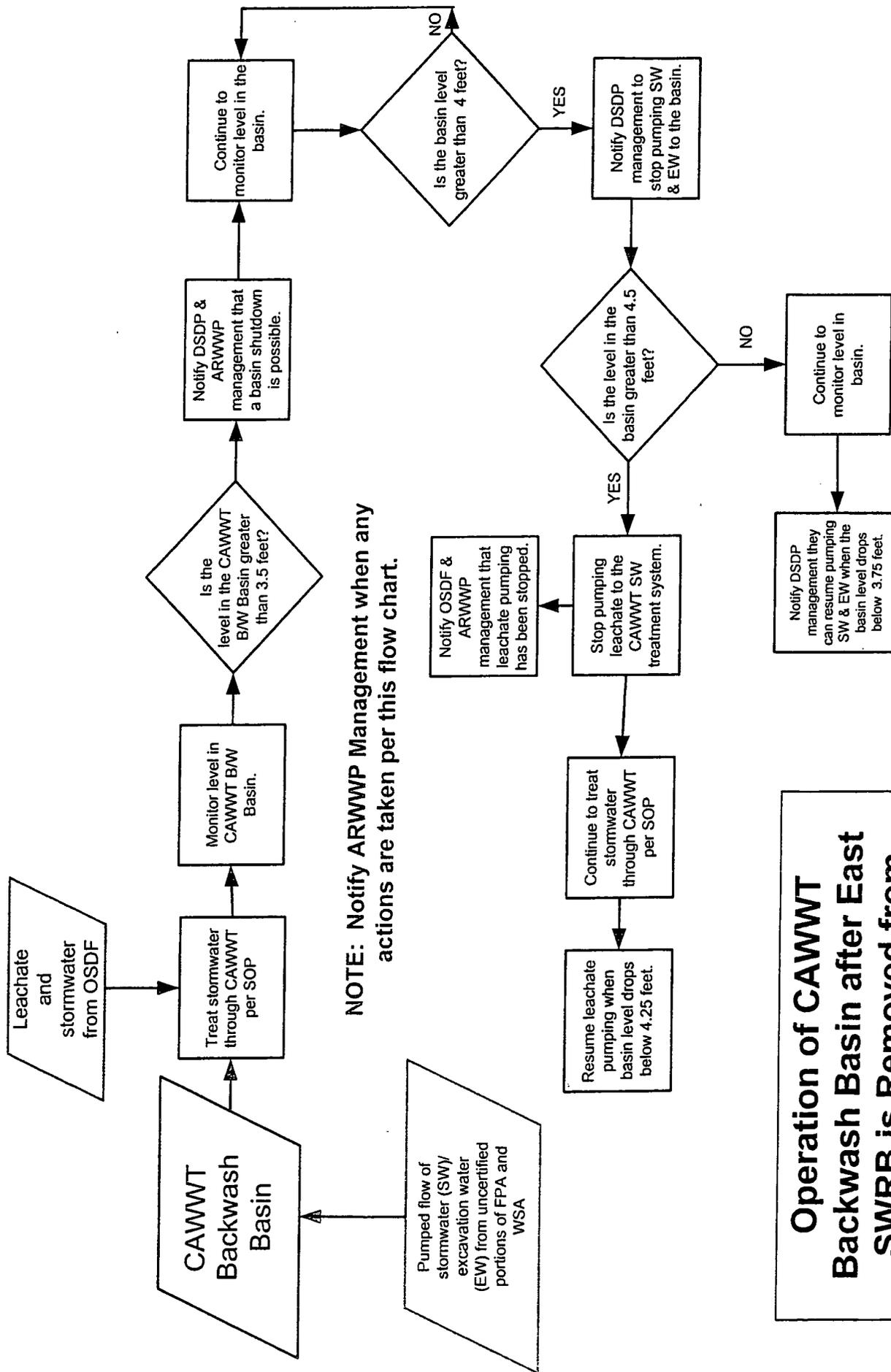
CAWWT Backwash Basin

The CAWWT Backwash Basin is a 100 foot by 100 foot by 6 foot deep above ground basin installed to contain backwash water from the CAWWT multimedia filters, carbon filter and ion exchange vessels for the duration of CAWWT operations. The basin has an approximate working capacity of 400,000 gallons to allow for a minimum of six inches of freeboard at all times. The basin contains a baffle to separate the influent from the effluent and allow any solids backwashed from the filters and IX vessels to settle prior to discharge back into the CAWWT stormwater treatment system.

While the Soils Project is still working in uncertified areas, the CAWWT backwash basin will also be used to collect stormwater from uncertified excavations. Solids from this stormwater will settle in the basin and the water will be discharged to the CAWWT stormwater treatment system. Pumping from excavations into the basin will be stopped when the basin level reaches four feet. Pumping will resume when the level drops below 3.75 feet.

Leachate from the OSDF is pumped directly to the CAWWT stormwater treatment system and not through the backwash basin. Leachate pumping to the treatment system will stop when the basin level reaches 4.5 feet and resume when the level in the basin drops below 4.25 feet.

A process flow diagram is attached.



NOTE: Notify ARWWP Management when any actions are taken per this flow chart.

Operation of CAWWT Backwash Basin after East SWRB is Removed from Service

11/18