

DATE: 9/11/07

TO: Mike McCann NRC Region III

FROM: Joe Jacobsen Battelle BCLDP RSO /*RA*/

SUBJECT: Breakdown of Battelle West Jefferson North Site Filter Bed Area
Dispositions of Filter Bed Systems

- I. There are currently two operating sand filter type sanitary sewer treatment systems in place at the West Jefferson North Site.
 - 1) The Active Middle Filter Bed System – this system was built in 2005 to allow for the existing Middle Filter Bed System to be shutdown in 2005 and sands removed from the two associated concrete vaults to allow for remedial action work under a portion of the concrete bunkers. This was necessary to allow for safe removal of soils underneath corners of the concreted vaults (less weight and no operational use of sands with liquids during shoring activities). The Active Middle Filter Bed System services part of the West Jefferson Middle Site Research Area activities and have nothing to do with our NRC licensed activities. The Middle Filter Bed System that was taken off line in 2005 also serviced the West Jefferson Middle Site research activities and had nothing to do with our licensed decommissioning activities.
 - 2) The Active North Filter Bed now services the JN-4 Facility only and its activities which are not tied to our NRC licensed activities. In this instance the Active North Filter Bed System was secured in 2004-2005 and the decommissioning activities covered the Active North Filter Bed due to its historic use to service the entire West Jefferson North Site including NRC licensed facilities. The inlet piping to the Active North Filter Bed and discharge piping to the radiological dip sampling station manhole area inside the fenced filter bed area was removed and dis-positioned as rad waste and surrounding soils remediated /verified as meeting release criteria. The sands in the two concrete vaults were removed and dispositioned as rad waste and the concrete vaults were surface surveyed with portable instrumentation to verify met release criteria. Following the remedial and verification work new sands were placed into the concrete vault sand new inlet and discharge piping installed and the system was put back on line with JN-4 Facility sanitary wastes only. The following is a summary of the operational surveys performed also including the ORISE surveys and NRC inspections as applicable:
 - “ Characterization and Final Status Survey Report for The Active North Filter Bed for Active North Filter Bed-North Subsurface Sand Filter” Rev 2 Dated 6/16/06
 - i) ORISE Independent Verification- Final Report- Verification Survey Results for the Active North Filter Bed (ANFB) North Subsurface Sand Filter dated 2/9/06

- ii) NRC Inspection Report, 070-00008/2005-001(DNMS) – BCLDP date 6/30/05
 - “Characterization and Final Status Survey Report for The Active North Filter Bed-South Subsurface Sand Filter” Rev 0 dated 08/05
 - i) ORISE Independent Verification – Final Report- Verification Survey of the the Active North Filter Bed – South Subsurface Sand Filter date 3/2/05
 - ii) NRC Inspection Report 070-00008/2004-003 (DNMS) dated 1/18/05
 - “Characterization and Final Status Survey Report for The Active North Filter Bed Discharge Line” Rev 1 dated 6/16/06
 - i) ORISE Independent Verification- Final Report- Verification Survey Results for the Active north Filter Bed Discharge line date 2/9/06
 - ii) NRC Inspection Report 070-00008/2005-001 (DNMS) dated 6/30/05
 - “Characterization and Final Status Survey Report for Manhole 7 to Manhole 8 Sewer Line” Rev 2 dated 6/16/06.
 - i) ORISE Independent Verification- Letter Report- Verification Survey of Manhole 7 to Manhole A and 8 Sewer Lines dated 12/13/04
 - ii) NRC Inspection Report 070-00008/2004-003 (DNMS) dated 1/18/05
- II. During the D&D work there were two abandoned retired filter bed systems removed by digging out the soils, sands and piping as well as the discharge line from the dip sampling station inside the filter bed fence to the Darby River was removed and replaced. All removed piping, sands, and contaminated soils were dispositioned as radioactive waste.
1. The Abandoned Middle Filter Bed which was located below surface as it had been covered over with soil during abandonment. The reports that cover this work are:
- i) “Characterization and Final Status Survey Report for the Abandoned Middle Filter Bed” Rev 2 Dated 6/16/06
 - ii) ORISE Independent Verification- Letter Report- Verification Survey of the Abandoned Middle and North Filter Beds and Manhole B to Manhole E1 Sewer Line dated 2/7/05
 - iii) NRC Inspection Report 070-00008/2004-003(DNMS) dated 1/18/05
 - iv) “Characterization and Final Status Survey Report for Manhole 7 to Manhole A Sewer Line” Rev 2 dated 6/16/06

- v) ORISE Independent verification-Letter Report- Verification Survey of Manhole 7 to Manhole 8 and A Sewer Lines dated 12/13/04
 - vi) NRC Inspection Report 070-00008/2004-003 (DNMS) dated 1/18/05
2. The Abandoned North Filter Bed Area which included a large area of below surface soil covered areas directly south of the current Active Middle Filter Bed and back to the south and south east to near the current filter bed fenced boundary.
- A1) Characterization and Final Status Survey Report for the Remaining Affected Areas Within the Filter Beds Area Including the Well Injection Deep Extraction (WIDE) System” Rev 1 dated 6/16/06
 - A2) ORISE Independent Verification-Final Report- Verification Survey Results for the WIDE System Area Excavation Rev 1 dated 6/20/06
 - A3) ORISE Independent Verification-Final Report- Verification Survey Results for the Remaining Affected Areas of the Filter Beds dated 6/20/06
 - A4) NRC Inspection Report 070-00008/2005-001(DNMS) dated 6/30/05

 - B1) “Characterization and Final Status Survey Report for Grids 33, 42,50,51,52, and 61 of the Abandoned north Filter Bed” Rev 1 dated 6/16/06
 - B2) ORISE Independent Verification-Document Review and Final Report Type A- Verification of Grids 42,50,51,52, and 61 of the Abandoned north Filter Bed dated 6/20/06.
 - B3) ORISE Independent Verification-Final Letter Report-Verification Survey Results of Grids 33, 52, and 61 dated 6/20/06

 - C1) “Characterization and Final Status Survey Report for the Areas Surrounding and Including the Active Middle Filter Bed” Rev 2 dated 6/16/06
 - NOTE: This is the Active Middle Filter Bed we pulled from service and replaced so we could undermine the sands holding concrete vault areas
 - C2) ORISE Independent Verification-Final Letter Report- In Process Survey Results for the North and South Vitriified Clay Pipes Active middle Filter Bed Area dated 6/20/06
 - C3) ORISE Independent Verification-Final Letter Report- Verification Survey Results for the JN1-4 Bog Area, SS-JN1-2 Outfall, JN-2 Sanitation Line Section A, and Active middle Filter Bed dated 6/20/06
 - C4) NRC Inspection Report 070-00008/05-002 (DNMS) dated 9/29/05
 - C5) NRC Inspection Report 070-00008/05-004 (DNMS) dated 3/23/06
3. The Discharge Pipe from the dip station monitor to the Darby Creek Release area
- i) “Characterization and Final Status Survey Report for West Jefferson North Abandoned Discharge Pipe dated April 2001
 - ii) NRC Inspection Report 070-00008/2000003