

## ESOI RISER PIPE DEFORMATION CHRONOLOGY OF EVENTS

(Riser Pipe events in non-bold)

**(Modification events in bold)**

***(Transducer events in bold italics)***

November 18, 2000	During maintenance, ESOI has difficulty removing a transducer from M3 secondary riser pipe (SRP)
December 2, 2000	During maintenance, ESOI has difficulty removing a pump from M4 SRP.
December 7, 2000	ESOI conducts an RVC inspection on the M4 SRP and discovers deformation.
December 11, 2000	ESOI conducts an RVC inspection on the M3 SRP and discovers deformation. ESOI conducts another RVC inspection of the M4 SRP.
January 3, 2001	ESOI submits a letter to OEPA which describes the deformation to the M3 and M4 SRP, as well as a potential remedy.
January 9, 2001	ESOI installs a jet pump into the M4 SRP, but the pump is not strong enough to operate under these conditions.
January 10, 2001	ESOI makes another unsuccessful attempt to get the jet pump to operate in the M4 SRP.
January 11, 2001	ESOI installs a transducer in the M4 SRP.
January 12, 2001	ESOI installs a pump and transducer in the M3 SRP, and resumes regular leachate removal from the M3 secondary sump.
January 15, 2001	ESOI installs a pump in the M4 SRP.
January 16, 2001	ESOI resumes regular leachate removal from the M4 secondary sump
January 18, 2001	ESOI submits a letter to OEPA which describes the actions taken by the facility to resume regular leachate removal from M3 and M4 secondary.
January 29, 2001	OEPA sends letter to ESOI requesting more information regarding pipe deformations.
January 30, 2001	ESOI conducts RVC inspections on all of the HDPE side-slope riser pipes in landfill cells G, I and M, and learns that M2 SRP is also deformed.
February 22, 2001	ESOI meets with OEPA to present the findings of their investigation into the deformed riser pipes, as well as a potential remedy.
March 2, 2001	ESOI responds to OEPA's January 29, 2001 information request.
March 9, 2001	ESOI submits a Class 1A permit mod request to OEPA to allow installation of stainless steel (SS) pipes within the deformed HDPE SRP at M2, M3 and M4, as well as implement a regular HDPE side-slope riser pipe inspection program.

March 19, 2001	ESOI submits a letter to OEPA that supplements their March 2, 2001 information request response and summarizes the information presented to the agency during the Feb. 22, 2001 meeting.
April 4, 2001	ESOI submits a letter to OEPA that further supplements their March 2, 2001 information request response and summarizes details related to the results of the facility's investigation into the deformed riser pipes.
May 9, 2001	ESOI receives OEPA's approval letter for the Class 1A permit modification request that the facility submitted on March 9, 2001.
<b>May 17, 2001</b>	<b>OEPA issues a draft modified permit to ESOI for C3 landfill mod</b>
May 17, 2001	ESOI has an industrial contractor on-site to begin evaluating the deformed SRPs to determine the largest diameter SS pipe that can be inserted into each riser.
June 1, 2001	OEPA reviews videotapes of M1 through M6 (both primary and secondary) of Cell M and discovers moderate deflection in M1 SRP as well as deformation in Cell I east secondary.
June 4, 2001	ESOI begins to install SS inserts in M3 secondary
June 5, 2001	ESOI begins to install SS inserts in M4 secondary
<b>June 12, 2001</b>	<b>Grant of TA for request of Phase 3 partial construction (submitted 4/27/01)</b>
<b>June 21, 2001</b>	<b>Public meeting for draft C3 landfill mod</b>
June 26, 2001	ESOI sends letter to NWDO verifying a copy of video tapes of riser pipes were sent to Oregon Document Depository
<b>July 2, 2001</b>	<b>End of Comment period for Landfill C3 mod, however, the director extends the comment period until August 1, 2001.</b>
August 3, 2001	ESOI begins installation of SS inserts into M2 after clearing out debris.
August 7, 2001	ESOI completes installation of all SS inserts.
<b>August 6, 2001</b>	<b>ESOI submits Landfill Component Notification (LCN) for non-placement of M3 Transducer in SRP.</b>
<b>August 6, 2001</b>	<b>Motion for Stay in TA Appeal (G. Poulos faxed to us).</b>
August 9, 2001	ESOI submits required video of the M5 and M6 secondary riser pipes per the May 9, 2001 permit approval to complete semi-annual inspections.
<b>August 15, 2001</b>	<b>Opposition to Appellant's Motion for Stay (Landfill TA)</b>
August 18, 2001	OEPA reviews ESOI video (of M5 and M6 secondary) showing no apparent changes in riser pipes.
<b>August 29, 2001</b>	<b>Order for dismissal Re: Landfill TA appeal for Phase 3 gross excavation.</b>
<b>September 18, 2001</b>	<b>Phase 3 Modification Approved by director.</b>
	<b>ESOI submits C1A mod for transducer non-placement (later submits C2</b>

<b>September 28, 2001</b>	<b><i>instead, see December 24, 2001).</i></b>
September ??, 2001	Pipe design report from Charles Moore (no date stamp on it, only month/year)
October 5, 2001	OEPA response to Mayor Haley Re: Riser pipe C1A mod vs. C3. C1A mod is appropriate designation per M. Savage.
October 9, 2001	ESOI submits SRP SS Riser Pipe Installation Certification.
<b>October 15, 2001</b>	<b><i>ESOI submits LCN for non-placement of M2 transducer.</i></b>
<b>October 23, 2001</b>	<b><i>ESOI notifies OEPA of ALR excursion for Subcell M6 due to construction.</i></b>
<b>November 1, 2001</b>	<b><i>OEPA notifies ESOI that transducer mod should be a C2 rather than C1A</i></b>
<b>November 6, 2001</b>	<b><i>ESOI notifies OEPA of ALR excursion for Subcell M5 due to construction.</i></b>
November 28, 2001	Evaluation of Riser Pipe Integrity (IOC) and Recommendation to NWDO from CO-engineering unit.
<b>December 24, 2001</b>	<b><i>ESOI withdrawal of 9/28/01 transducer C1A mod and submits a C2 mod at the request of OEPA.</i></b>
<b>December 27, 2001</b>	<b><i>OEPA meets with Charles Moore, Ph.D (Oregon's engineering consultant) to discuss riser pipe recommendation, etc.</i></b>
January 17, 2002	OEPA meets with ESOI to discuss procedure / scheduling for riser pipe insert installation per recommendation.
January 25, 2001	OEPA requests several clarifications in the Riser Pipe Installation Certification before approval of certification.