

The following table presents the chronology regarding the definition of licensed area and approved D&D activities at HMI after the first ORISE confirmatory survey indicated additional contamination remained at the site.

DATE	COMMUNICATION TYPE / ADAMS ML#	SUMMARY
11/22/02	HMI to NRC Not in ADAMS - requested scanning 7/14/05	<p>Description of site process history. Submitted to show that HMI had already shipped off more soil as licensed material than had been created.</p> <p>They state that elevated levels of radionuclides in areas east and south of the dry mill are the result of unlicensed mineral recovery operations before the NRC license was issued. Also state that pockets of licensable materials in these areas had the same origin.</p> <p>They state "Therefore, as the current site owner, HMI proposes to remove these 'pockets' of licensable source material from the site with approval from NRC through an administrative letter or a separate licensing action under HMI's existing license. <u>Any residual monazite concentrations remaining onsite that are below NRC licensable levels will be addressed with the State of New Jersey's Department of Environmental Protection. . . along with all other areas of the HMI site which contain slightly elevated levels of radionuclides resulting from mineral recovery operations.</u>"</p>
12/20/02	HMI to NRC (ADAMS ML030090197)	<p>Results of a characterization survey of the land behind the dry mill building adjacent to and including the footprint of the former monazite pile. Identifies several locations with licensable concentrations of source material (all outside the monazite pile footprint). Includes a map showing the sample locations and includes sample results. 5 of the 13 samples taken (sample locations determined from gamma scan of area) identified licensable quantities.</p>
12/23/02	NRC to HMI (ADAMS ML023570327)	<p>Transmittal of Inspection Report. Describes the decommissioning activities performed IAW the DP (removal of monazite pile and cleanup of mill buildings). States that ORISE Confirmatory survey showed contamination remained on and around monazite pile area and in mill buildings. States that 11/22/02 process history report describes the additional remediation activities required.</p> <p>Signature: G.Pangburn Concurrences: RI DNMS, ORA</p>

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1/17/03	NRC letter to HMI (ADAMS ML030170524)	<p>transmittal of 1/8/03 PEC summary. Requests the following:</p> <ol style="list-style-type: none"> 1) amendment request to remediate additional contaminated soil identified in 11/22/02 Process History and in 12/20/02 Characterization survey 2) Provide a plan to complete wet and dry mill D&D using NRC-accepted methodology. <p>Attendees: RI DNMS, DWM (phone), OE (phone), HMI, NJDEP (P. Gardner, N. Stanley)</p> <p>Signature: G. Pangburn</p> <p>Concurrences: ORA, OE</p>
3/10/03	HMI Letter to NRC (ADAMS ML030830547)	<p>Resultant letter from 1/8/03 EC, in which NRC asked HMI to address 3 issues. They reply:</p> <ol style="list-style-type: none"> 1) Removal of pockets of licensable soil: they argue that the soils below licensable levels are the same as the blue and grey areas. They state they will only remove the licensable soil. <u>They note that all affected areas will have to meet NJDEP standards for developing the area.</u> 2) they attached a plan for final D&D of wet and dry mill buildings. 3) info on pursuit of ASARCO liability. No info.
4/9/03	EP Worksheet (ADAMS ML031000043)	<p>Describes 3/10/03 letter and HMI proposals and determines them to be acceptable. Statement made that NMSS and OGC are considering the licensee criteria re pockets.</p> <p>Attendees: RI DNMS, ORA, OE, NMSS</p>
5/6/2003	HMI letter to NRC (ADAMS ML031320537)	<p>as a result of 1/8/03 EC, a 3/10/03 letter with final D&D activities was proposed. Another EC on 4/9/03 discussed plan and suggested revisions. This letter has the revisions. It affirms:</p> <ol style="list-style-type: none"> 1) HMI will perform D&D of wet and dry mill bldgs IAW 3/10/03 letter 2) <u>Fugitive pockets inside monazite pile area will be excavated so bottom meets BTP. Other elevated soil need not be remediated as it was preexisting, unlicensed material.</u> 3) <u>Fugitive pockets outside monazite pile area will also be remediated so bottom meets BTP.</u>

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5/19/2003	NRC letter to HMI (ADAMS ML031410319)	<p>Acknowledges that 5/6/03 letter adequately summarizes discussions with NRC staff related to additional planned decommissioning and commitments to complete final site remediation. "This included a determination of release criteria for residual material within and around the monazite pile footprint, removal of fugitive licensed material outside the pile, offsite shipment of material, and demolition of the mill buildings".</p> <p>Signature: R. Bellamy Concurrences: C. Gordon, ORA</p>
6/25/2003	HMI to NRC (ADAMS ML031840694)	License renewal application.
6/26/2003	HMI to NRC (ADAMS ML031960118)	Report and surveys describing removal of fugitive soil pockets
7/15/2003	NRC Transmittal of renewed license to HMI (ADAMS ML031980313)	<p>L.C. 15 States that "All areas in the plant buildings and at the monazite pile having radiation levels above natural background on a map of the licensee's site in letter (9/27/90) or in FSSP (11/10/97) shall be deconned to meet BTP Option 1. May apply for approval of other limits.</p> <p>Signature: C. Gordon Concurrence: R. Bellamy</p>
12/16/03	EC Summary (ADAMS ML033510055)	<p>describes the NRC approval of HMIs 5/6/03 plan. States that NRC verified through surveys that HMI completed the soil remediation. States that NRC had ORISE perform second confirmatory survey and that additional pockets were identified. Licensee is reviewing options of either 1) address additional pockets or 2) complete dose assessment.</p> <p>Attendees: RI DNMS, ORA, RI OGC, NMSS</p>

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1/8/04	NRC letter to HMI (ADAMS ML040130730)	<p>Transmittal of Inspection Report. Contains good description of the agreed-upon D&D actions, and states that the process history report and mass balance were considered in approving the 5/6/03 letter. States that D&D of mill buildings and equipment were performed IAW FSSP unrestricted release guidelines. Also states that ORISE2 indicates the licensee decon commitments were only partially met and that additional pockets of material remain.</p> <p>Signature: R. Bellamy</p>
6/30/04	HMI Letter to NRC (ADAMS ML041910222)	<p>Proposes actions to complete D&D of outside areas.</p> <ol style="list-style-type: none"> <li data-bbox="698 793 1435 993">1) Includes a proposed final NRC site boundary, and states that any <u>remaining fugitive licensable soil material within that boundary will be removed</u>. The boundary includes the ORISE-pockets, the mill pads, the former monazite pile footprint, and a buffer zone. <li data-bbox="698 993 1435 1098">2) Proposes disposing of stockpiled sands from deconning wet and dry mill buildings as blue/grey waste

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7/21/04	NRC TAR re 6/30/04 Letter (ADAMS ML042040437)	<p>TAR sent to DWM to review :</p> <ol style="list-style-type: none"> 1) the proposed red area ("buffer zone") 2) the disposition of the stockpiled material <p>TAR states:</p> <ol style="list-style-type: none"> 1) "The proposed buffer zone is an extension of the red area, into which HMI will identify remaining licensable (>116 pCi/g thorium) fugitive material. Soil samples will be taken at these locations, and any fugitive material found will be remediated to meet soil concentration guidelines in the DP. Recommendation to approve the boundary is consistent with the 11/30/90 [Fonner memo], to not regulate the blue and gray areas, and HMI's commitment [5/6/03] to remove subsurface pockets of fugitive material. From the 2003 ORISE survey and the followup survey by HMI's contractor in 2004, it appears that any fugitive material remaining in the licensed (red) area has been identified and is included within the proposed buffer zone" 2) After mill demolition, small amounts of concentrated material remained in the red area within building infrastructures, which was washed off and combined with material from structures in unaffected areas. 95% of the sand was not part of the unit that concentrated monazite during active operations, and the material composition is similar to blue/gray area material (<0.05% Th/U). Since stockpiled sands do not exceed licensable source material levels, HMI asserts no further action is necessary under NRC license and the material should be addressed under NJDEP soil remediation standards.

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8/30/04	TAR response (ADAMS ML042320200)	<p>1) "DCD staff concurs with the concept of formally delineating the area within the HMI site that would be subject to NRC jurisdiction for the purpose of decommissioning." The response states, however that the action should be coordinated with New Jersey, as it would impact the blue and gray area boundaries. Also states it is unclear if this affects the description of the site in the license and requires a hearing. Also recommends obtaining info on the method and instrument used to develop red area map. Concludes with "Subject to DNMS' determination regarding the need for a license amendment, if HMI provides this detail, DCD has concluded that HMI's proposal to formally delineate the area within the HMI site that would be subject to NRC jurisdiction for the purpose of decommissioning, should be approved."</p> <p>2) Concludes that the stockpiled material "is licensed material with low concentrations of source material from licensed activities". And that it "should be managed in the same manner as other residual radioactivity that was associated with licensed operations at the site" (i.e. disposed of as LLRW)</p> <p>Concurrences: NMSS, OGC (M. Schwartz)</p>
11/17/04	NRC letter to HMI (ADAMS ML043240049)	<p>Letter forwarding TAR results. States that:</p> <p>1) Buffer zone was approved. "Any material located within this bounded area, even if outside the footprint of the former monazite pile, that contains a concentration of thorium in excess of the unimportant quantity limits. . . must be remediated to below 10 pCi/g. However, any material within the bounded area that is less than 116 pCi/g of thorium will be treated as an unimportant quantity which does not require further remediation".</p> <p>2) Stockpiled waste must be disposed as licensed material.</p> <p>Signature: R. Bellamy Concurrences: RI DNMS, RI OGC</p>