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Appendix B

Evaluation of Rail Transport Option

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In its September 9, 2008 comments on the CMS Report, EPA, in General Comment 5, directed GE to "submit an evaluation of the use of rail as a transportation option for potential offsite disposal." To assist in responding to this comment, GE retained the services of R.L. Banks and Associates, Inc. (RLBA), of Arlington, Virginia, a rail consulting firm, to evaluate the feasibility of transporting excavated materials from the Housatonic River and floodplain by rail to an appropriate off-site disposal facility or facilities. RLBA's evaluation was limited to the physical/technical feasibility of rail transportation of these materials. Based on its evaluation, RLBA concluded that rail transport of the excavated materials would be technically feasible. The bases for that conclusion were previously provided in GE's Response to General Comment 5 in its *Response to EPA's Interim Comments on CMS Report* (Interim Response; March 2009) and are reiterated below.

The initial question in this evaluation related to the availability of suitable rail service in the Rest of River area. It was found that the Housatonic Railroad Company, Inc. (HRRC) operates regularly scheduled freight train operations over its tracks in close proximity to the Housatonic River in the area between Pittsfield and Housatonic, Massachusetts. In preliminary discussions, HRRC indicated that it has adequate rail infrastructure and locomotive power to handle the anticipated volumes of materials at the anticipated production rates under the CMS alternatives. HRRC's main line is capable of handling cars of 286,000 pounds (lbs) gross loading, the *de facto* industry standard. The trackage that would support project shipments is maintained to a mixture of Federal Railway Administration (FRA) Class 1 and Class 2 standards, permitting freight operations at 10 and 25 miles per hour (mph), respectively. Based on RLBA's spot checks and conversations with HRRC, this trackage is actively maintained and would appear to be adequate to handle rail cars containing project materials, although this would need to be confirmed by an on-track inspection.

While the HRRC maintains tracks in relatively close proximity to the River in some sections, it is important to note that it is impractical to load railroad cars when they are located on an active railroad line because it is inherently unsafe and would interfere with existing operations. Therefore, another important factor is the availability of loading areas that either exist or could be constructed to facilitate the staging of empty railcars, the loading of railcars, and the switching/movement of loaded cars into the traffic flow of the rail line. A preliminary review indicated that potential loading sites exist adjacent to or in very close proximity to the HRRC tracks, some of which already feature at least some rail infrastructure. If one of these potential sites were viable, it would limit the need to construct

entirely new staging/loading tracks, although some new tracks would likely need to be constructed. At this time, it is anticipated that a single rail loading site would be selected and then configured appropriately to allow the loading of railcars. RLBA estimates that about 3.5 acres would be needed for the construction of the loading areas, with an additional four acres in an elongated shape to support the construction of new tracks.

Once dewatered (as necessary) at the temporary staging areas near the River, the excavated materials would be transported by trucks to the rail loading site, using trucks similar to those considered for transport to off-site landfills. Materials subject to regulation under the Toxic Substances Control Act (TSCA) and non-TSCA materials would be segregated in separate storage and loading areas. The TSCA and non-TSCA materials would then be loaded into conventional open-top, low-side gondola railcars, again keeping those materials segregated. It is anticipated that the cars would be lined with a "Super Sack" or similar plastic disposable liner, which would be closed over the top to form a watertight wrapping. It is unlikely that railcars would be provided by the railroads; therefore GE would need to procure the cars elsewhere through either purchase or lease.

Rail service to and from the loading site would be provided by HRRC. After loading, the outbound loaded railcars would need to be moved by HRRC to an interchange with a longer-haul railroad. HHRC has an existing interchange with CSX Transportation, Inc. (CSX) in Pittsfield, to which HHRC currently sends (and receives) a train every day (averaging about 30 to 35 cars per day). The additional railcars holding project materials could be added to that train. That interchange track can hold over 200 cars, which should be sufficient to handle the movement of project materials as well as the existing freight volume. From that interchange, the loaded cars would be moved by CSX, and perhaps subsequently other railroads, to an appropriate off-site landfill or landfills, as discussed below.

In assessing the feasibility of rail transport as described above, RLBA considered a range of removal volumes and corresponding project durations, based on the sediment and floodplain remedial alternatives under evaluation. The minimum volume was based on a combination of alternatives SED 3 and FP 2 (approximately 190,000 *in situ* cy of removal), with an estimated overall project duration of slightly less than 10 years. The maximum volume was based on a combination of SED 8 and FP 7 (approximately 2.9 million *in situ* cy of removal), with an estimated overall project duration of approximately 50 years. It was estimated that the minimum material volume generated by the project would result in about 660 carloads of TSCA material (about one-half carload per day) and about 3,400 carloads of non-TSCA material (about two carloads per day during most of the project, peaking at three carloads per day in the last year). RLBA concluded that these are acceptable volumes for rail transport. Under the maximum removal scenario, it was estimated that the project would result in about 9,900 carloads of TSCA material (ranging from about one to

four carloads per day) and about 37,000 carloads of non-TSCA material (ranging from three to eight carloads per day during most of the project to 12 carloads per day late in the project). It was concluded that these volumes could be handled by the railroads and would not overwhelm their capacities. It was further concluded that rail service would likely be available for the duration of the project, even up to the maximum duration of approximately 50 years, although projections that far into the future are uncertain.

The estimated volumes for this project would not be sufficient to warrant the use of unit trains (in which all cars in a train are dedicated to carrying project materials). Instead, at the HRRC/CSX interchange, project cars would be included on trains in general freight service and would be forwarded as part of general freight trains along the various routes of CSX and potentially other long-haul Class 1 railroads (with additional interchanges as necessary) until the selected landfill location(s) were reached.

Finally, the evaluation of rail feasibility included an assessment of the availability of rail-served landfills with the physical capability and regulatory approvals to unload, handle, and dispose of TSCA and non-TSCA materials. RLBA confirmed the availability of numerous such landfills at the present time, including both TSCA and non-TSCA landfills, located in a number of states outside of Massachusetts. Upon arrival of the loaded railcars at the selected landfill(s), the contained materials would be unloaded and disposed of by the landfill operator. The empty railcars would then be returned to the loading facility via the reverse route. However, the potential availability of off-site landfills served by rail over project durations as long as 50 years is uncertain.

Based on the foregoing considerations, RLBA concluded that rail transport of the excavated Rest of River sediments and soils to off-site landfill(s) appears to be a technically feasible option.