APPENDIX

OSWER 9283.1-38

This appendix represents data submitted on the status of the progress of recommendations as of the January 2012 tracking and follow up period. The status of the progress of recommendations from prior tracking periods can be found in previous Progress Reports, referenced in the reference section of this report. These reports are available online at http://www.epa.gov/superfund/cleanup/postconstruction/optimize.htm.

Site Name: **GCL Tie & Treating (Sidney, NY)** **EPA ID#:** NYD981566417

RSE Report: EPA 542-R-06-016 (December 2006)

Recommendation	Status	Progress since the previous progress report
Remedy Effectiveness		
6.1.1 Institute a routine ground water monitoring program	Implemented	
6.1.2 Optional plume delineation	Implemented	
6.1.3 Soil vapor intrusion evaluation	Implemented	
Cost Reduction		
6.2.1 Discontinue pumping from the intermediate zone	Implemented	
6.2.2 Consider modifications to the backwashing and solids handling procedures (contingent of outcome of 6.2.1)	Under Consideration	The recommendation is still on hold. At this point, there is no need for modifications.
6.2.3 Suggestions for long-term ground water monitoring	Implemented	
6.2.4 Pilot test bypassing the air stripper	Declined	
6.2.5 Consider a hybrid time and materials and fixed-price contract	Alternative Implemented	
6.2.6 Reductions in project management consistent with steady state system operation	Implemented	
Technical Improvement		
6.3.1 Relocate equalization tank high-level switch	Implemented	
6.3.2 Discontinue use and service to generator	Declined	
6.3.3 Modify use of water levels from operating extraction wells when developing potentiometric surface maps	Planned	This recommendation would be implemented during the generation of the 2011 annual monitoring well sampling report which is currently being drafted.

Site Name: **Vineland Chemical Co. (Vineland, NJ)** **EPA ID#:** NJD002385664

RSE Report: EPA-542-R-11-007 (November 2011)

Recommendation	Status	Progress since the previous progress report
Remedy Effectiveness		
6.1.1 Further characterize extent of contamination	In progress	An evaluation is currently underway to further our understanding of contaminant release and migration processes on site. See also 6.1.3 and 6.4.2.
6.1.2 Consider modifications to the groundwater extraction system to assure capture	In progress	Plume capture is under investigation and continues to be evaluated. Elevated levels of arsenic in select areas northwest and southwest of main plant property appear not to be a source, but related to a residual or remnant plume contamination.
6.1.3 Additional monitoring of groundwater quality between extraction wells and Blackwater Branch	In progress	In the summer/fall of 2011, monitoring wells were installed in 11 locations, 8 were nested (located along the Blackwater Branch) for a total of 19 new wells.
Cost Reduction		
6.2.1 Discontinue automated sampler and do not replace the unit	In progress	The team agreed that the risk of turning off the OVA and discontinuing the use of the graphite furnace is minimal, considering we normally treat well below the permitted discharge level of 50ppb, and that most other plants do not have such a conservative sampling setup. The contractor will provide a cost estimate for savings associated with discontinuing the use of the OVA and graphite furnace.
6.2.2 Eliminate routine on-site arsenic sampling	Planned	The project team will evaluate potential reductions in sampling frequency.
6.2.3 Reduce extraction rates to those that are necessary for plume capture	Under consideration	This has been discussed, and a further evaluation by USACE is underway.
6.2.4 Evaluate groundwater monitoring costs	Under consideration	This has been discussed, and a further evaluation by USACE is underway.
6.2.5 Continue to optimize groundwater monitoring program	Implemented	All extraction wells are now computerized. Optimization (for cost and quality control) activities will continue on site. The last round of optimization included: computerization of operations control to reduce labor on site, piping changes to enhance process efficiency/ performance, optimizing chemical usage to reduce costs, and the adjustment of well development protocols.
6.2.6 Focus building heating and lighting on key process area	Under consideration	After an exit strategy is decided upon, EPA will ask USACE and site contractor to determine feasibility and costs associated with recommendations 6.2.6, 6.2.7, and 6.2.8.
6.2.7 Evaluate chemical usage	Under consideration	After an exit strategy is decided upon, EPA will ask USACE and site contractor to determine feasibility and costs associated with recommendations 6.2.6, 6.2.7, and 6.2.8.

Site Name: **Vineland Chemical Co. (Vineland, NJ)** **EPA ID#:** NJD002385664

RSE Report: EPA-542-R-11-007 (November 2011)

Recommendation	Status	Progress since the previous progress report
6.2.8 Consider use of a plate and frame filter press to dewater solids	In progress	The team agreed that an existing plate and frame filter press could be a good way to reduce waste disposal. The RSE team and site contractor will research availability of a unit from another site and provide a cost estimate for removing unit from the existing location, installation and operation.
6.2.9 Consider the use of lime for pH adjustment	Declined	The team agreed that employing a lime system would have high capital cost and operational issues that make it impractical for this site.
6.2.10 Continue to streamline plant and project staffing	In Progress	Efficient labor utilization is a primary goal of the project team.
6.2.11 Based on outcome of other recommendations, consider potential for delisting waste sludge	Declined	A Superfund finding is in place for washed media reuse and evaluating contained-in policy for waste/media disposal practices. The sludge appears to be too concentrated with arsenic to allow for de-listing.
Technical Improvement		
6.3.1 Refine well rehabilitation practices	Implemented	Monthly well meetings are conducted to evaluate system performance for optimized extraction and well field pumping is adjusted accordingly.
6.3.2 Discontinue use of curtains and electrical heaters for sand filters	Under consideration	Site contractor will look into this item and provide recommendations.
6.3.3 Continue with plan to remove soil washing equipment from the site	Under consideration	Evaluation of soil washing for River Areas/Union Lake still needs to be conducted. As of January 2012, the equipment is still under consideration for use in later phases of this project.
6.3.4 Prepare an annual report	In Progress	USACE is currently compiling a report that summarizes work done since 2000. A five year review for Vineland Chemical was finalized in September 2011.
Progress Toward Cleanup Goals		
6.4.1 Evaluate potential for natural attenuation and suggested criteria for discontinuing P&T	In Progress	Continued operation of the P&T is imperative as system shutdown will result in discharges to surface water exceeding the ROD criteria. The USACE is currently evaluating the potential for MNA.
6.4.2 Active in-situ treatment for arsenic immobilization	In Progress	Based on the RSE recommendation, an evaluation of arsenic immobilization technologies is underway. Geochemical data was collected in the summer of 2011 to support overall understanding of contaminant release/migration processes, provide baseline data for both immobilization and mobilization enhancement technology strategic planning. More sampling is scheduled for the spring/summer of 2012
6.6.1 Suggested exit strategy	In Progress	The USACE is currently carrying out investigations in response to the RSE recommended approach.

Site Name: Vineland Chemical Co. (Vineland, NJ) **EPA ID#:** NJD002385664

RSE Report: EPA-542-R-11-007 (November 2011)

Recommendation	Status	Progress since the previous progress report
Green Remediation		
6.7.1 Consider combined heat and power	Planned	The team agreed that a newer, greener system is desirable, if feasible. The site contractor will get vendor estimates for new gas generator systems (i.e., Bloom Box, or micro turbine). Another added feature to check on is the use of any excess waste heat from the system to be focused on drying the sludge more to decrease waste disposal costs.
6.7.2 Consider alternatives for iron addition	Under Consideration	After an exit strategy is decided upon, EPA will ask USACE and site contractor to determine feasibility and costs associated with recommendations 6.71, 6.7.2, and 6.7.3.
6.7.3 Postpone lighting retrofit	Planned	All agreed to try out a new high bay fixture (manufacture brand to be provided by USACE) before purchasing for the entire plant.

Site Name: **Tutu Wellfield (Tutu Wellfield, VI)** **EPA ID#:** VID982272569

RSE Report: EPA-542-R-11-008 (November 2011)

Recommendation	Status	Progress since the previous progress report
Remedy Effectiveness		
6.1.1 Hydraulic Containment	Planned	The site team developed a detailed scope including adding four extraction wells, hooking them up to the system and start-up tasks as well as one additional monitoring well. The site team obtained contractor costs for this work and project costs at over $500,000 not including CDM Smith management versus the RSE estimate of $210,000. Implementation has been delayed due to lack of available funding. The RSE team has not seen the detailed work scope or contractor submittals to comment on the difference between the cost estimates.
6.1.2 No Additional Downgradient Active Remediation	Implemented	The site team has not changed the current approach.
6.1.3 Curriculum Center Vapor Intrusion Resampling	Implemented	The vapor intrusion resampling was conducted in December 2011, results are not yet available. Total costs for the work will be about $35,000 versus the $45,000 RSE estimate
6.1.4 Include MTBE Analysis	Implemented	The site team reports that MTBE analysis is occurring as part of the VOC scan. MTBE results were relatively low or non-detect so that MTBE migration is not a concern.
Cost Reduction		
6.2.1 Improve Contracting Efficiency	Deferred to State or PRP	The site team stated that these changes cannot be implemented under the current contract which will run until the turnover to USVI. The USVI should consider the recommendations after the turnover.
6.2.2 Termination of GWTF #2 Operation	Under Consideration	The site team plans to wait until the hydraulic containment improvements are completed at GWTF #1 before implementing this recommendation.
6.2.3 Reduce Operator Visits including Decreasing Well Gauging Frequency	Deferred to State or PRP	The site team stated that these changes cannot be implemented under the current contract which will run until the turnover to USVI. The USVI should consider the recommendations after the turnover.
6.2.4 Eliminate Emissions Sampling at GWTF #1	Under Consideration	The site team will consider writing a letter to USVI to eliminate this redundant sampling requirement. The site team noted that analysis is being done by the USEPA CLP lab.
Technical Improvement		
6.3.0 Remove excess air discharge ducting and consider air strippers with less power requirements	Under Consideration	The site team plans to wait until the hydraulic containment improvements are completed at GWTF #1 before implementing this recommendation.
Progress Toward Cleanup Goals		
6.4.0 Considerations for Gaining Site Close Out	Under Consideration	The site team plans to wait until the hydraulic containment improvements are completed at GWTF #1 before implementing this recommendation.

Site Name: **Tutu Wellfield (Tutu Wellfield, VI)** **EPA ID#:** VID982272569

RSE Report: EPA-542-R-11-008 (November 2011)

Recommendation	Status	Progress since the previous progress report
Green Remediation		
6.5.0 Consider alternative effluent discharge and energy sources	Under Consideration	No further action has been taken to date.

Site Name: **Mill Creek Dump (Erie County, PA)** **EPA ID#:** PAD980231690

RSE Report: EPA-540-R-10-014 (February 2010)

Recommendation	Status	Progress since the previous progress report
Remedy Effectiveness		
6.1.1 Further Characterize Extent of Contamination	Implemented	DPT sampling was conducted at 18 locations, with 35 samples collected in August 2010. Results indicate the most offsite locations sampled do not have contamination. Two locations at the northern edge of the site (near the pond) had DCE and vinyl chloride contamination above ROD screening levels. Results are still being evaluated with respect to the modeling and capture zone analysis discussed in 6.1.4.
6.1.2 Install Additional Points for Water Level Measurements	Implemented	Six new monitoring wells were installed in November 2010, consistent with the RSE recommendation.
6.1.3 Conduct a Shutdown and Restart Test of the Extraction System	Implemented	Conducted in December 2010.
6.1.4 Document the Findings from the Above Events, Use Findings for Capture Zone Analysis	Implemented	A MODFLOW model has been developed using findings from the above field investigations. Separate comments were provided by the RSE team on the capture zone document and modeling report.
6.1.5 Automate Chemical Feeds or Provide Appropriate Interlocks to Discontinue Chemical Feeds if One or More Extraction Trenches Discontinue Operation	Declined	It was determined that nothing in the system requires changing, as the one main release occurred as a result of human error.
6.1.6 If Off-Site Shallow Contamination is Identified and Determined to be Related to the Site, Conduct a Vapor Intrusion Evaluation	Implemented	Five residences were sampled in December 2010. Results did not demonstrate a vapor intrusion problem.
Cost Reduction		
6.2.1 Discontinue April Sampling Event	Implemented	The April event was conducted in April/May 2011, however it has been discontinued starting in 2012.
6.2.2 Discontinue Analysis for Dissolved Metals	Planned	The site team agrees with this recommendation and will implement it in 2012.
6.2.3 Streamline Process Sampling	Declined	With the current treatment plant staffing, the suggested revisions to process monitoring will not result in savings. Therefore, the site team will not make the adjustment.
6.2.4 Revisit Data and Reporting Costs	Implemented	The site team reports that the semi-annual report has been eliminated, resulting in savings of $8,350. No other changes were reported to the data and reporting costs.

Site Name: **Mill Creek Dump (Erie County, PA)** **EPA ID#:** PAD980231690

RSE Report: EPA-540-R-10-014 (February 2010)

Recommendation	Status	Progress since the previous progress report
6.2.5 Reduce or Eliminate Lime Conditioning of Sludge	Planned	PADEP's contractor will reduce the lime conditioning, initially by 50%, and evaluate the effectiveness. The contractor will then adjust the amounts to determine the optimum conditions.
Technical Improvement		
6.3.1 Cleanup of Treatment Plant	Implemented	The treatment plant has been cleaned and organized.
6.3.2 Considerations Regarding Treatment Plant Modifications, if Necessary	Under Consideration	PADEP, which is responsible for operating the remedy, will need to revisit this recommendation before making a decision to implement it.
Progress Toward Cleanup Goals		
6.4.1 Determining a Path Forward	Under Consideration	The site team recognizes the need to determine a path forward and relayed that the Five-Year Review includes delineation of contamination as an issue to be resolved.
Green Remediation		
6.5.1 Revised Approach to Metals Removal	Under Consideration	PADEP, which is responsible for operating the remedy, will need to revisit this recommendation before making a decision to implement it.
6.5.2 Considerations for Renewable Energy at the Site	Declined	The site team reports several failures of renewable energy projects in the area (not site related) and will postpone consideration of renewable energy at the site for the foreseeable future.

Site Name: **Alaric Area Groundwater Plume (Tampa, FL)** **EPA ID#:** FLD012978862

RSE Report: EPA-540-R-10-013 (January 2010)

Recommendation	Status	Progress since the previous progress report
Remedy Effectiveness		
6.1.1 Carefully Determine an Appropriately Conservative Buffer when Informing the State of Plume Extent Related to Establishing Ground Water Restrictions	Under consideration	More extensive work on the groundwater plume will be conducted once source area soils are addressed. The timeline for a site-wide FS and final ROD is approximately 3+ years after implementation of the source zone remedy.
6.1.2 Analyze Process Water Periodically for Constituents of Concern from the Helena Chemical Site	Implemented	After the system was restarted in May 2011, the site team conducted process sampling that included a broader suite of contaminants, including pesticides. This sampling is planned to occur on a semi-annual basis. The site team reports that there were low-level detections of pesticides in some of the recovery wells and that there were no detections in the effluent.
6.1.3 Simplify System Controls	Implemented	The existing complex control system was simplified.
6.1.4 Monitor Specific Capacity in Recovery and Reinjection Wells	Implemented	These monitoring activities will occur during system operation when the system is restarted.
6.1.5 Interpret Capture	Under Consideration	This item has been discussed, and there is general consensus that it is needed.
Cost Reduction		
6.2.1 Modify VOC Treatment	Alternative Implemented	The treatment system has been updated with a new air stripper, new piping, and addition of sequestering agents.
6.2.2 Consider Discharging to the Shallow Zone	Implemented	The treated water is now discharged to the shallow aquifer through the existing infiltration galleries.
6.2.3 Characterize GAC Again and Investigate Source of Radioactivity in an Attempt to Dispose of GAC as Non-Hazardous Waste or to Regenerate It	Implemented	March 22, 2011 – The previous detection of radioactivity is expected to be a one-time issue. The GAC is due for changeout and will be characterized prior to disposal.
6.2.4 Track Routine O&M Costs Separately from Non-Routine Costs	Implemented	A cost tracking system has been set up for GeoSyntec with separate routine and non-routine line items.
Technical Improvement		
6.3.1 Consider the Following Comments to the May 2009 Technical Review by the Site Contractor	Implemented	The treatment plant upgrades have been completed.

Site Name: **Alaric Area Groundwater Plume (Tampa, FL)** **EPA ID#:** FLD012978862

RSE Report: EPA-540-R-10-013 (January 2010)

Recommendation	Status	Progress since the previous progress report
Progress Toward Cleanup Goals		
6.4.0 Considerations for Gaining Site Close Out	Alternative Implemented	In-situ thermal treatment will replace the in-situ chemical oxidation remedy previously used to address source area soils. The other potentially contaminated areas and plume area will be considered once the source area has been addressed. The design for the in-situ thermal remedy is underway.

Site Name: **Benfield Industries (Waynesville, NC)** **EPA ID#:** NCD981026479

RSE Report: EPA 542-R-07-020 (September 2007)

Recommendation	Status	Progress since the previous progress report
Remedy Effectiveness		
6.1.1 Document potential downgradient receptor locations and adjust monitoring locations if necessary	Declined	
6.1.2 Consider sampling for dioxins/furans in soil	Declined	
6.1.3 Document rationale for eliminating metals analysis	In progress	The ROD amendment now planned to be completed by May 2015, and will address this issue.
Cost Reduction		
6.2.1 Do not restart the extraction system	Implemented	
6.2.2 Consider monitored natural attenuation as the ground water remedy	In progress	The draft MNA report was completed in July 2011 and reviewers found lines of evidence did not support an MNA remedy without addressing some remaining hot spots. The contractor is currently working on plans to identify and address the remaining hot spots followed by writing the draft ROD amendment. It is anticipate to take three years to complete this assignment by May 2015 (FY 2015).
Technical Improvement		
6.3.1 Improve sampling and analysis methods/reports	Implemented	The past five sampling events have used analytical methods that provide reporting limits at or below the current ROD cleanup levels. The ROD amendment is now anticipated to be complete by May 2015.
Progress Toward Cleanup Goals		
6.4.1 Assess feasibility and cost-benefit of in-situ treatment of remaining soil hot spot(s)	In progress	The contractor is currently working on plans to identify and address the remaining hot spots followed by writing the draft ROD amendment. It is anticipate to take three years to complete this assignment by May 2015 (FY 2015)
6.4.2 Consider reassessing the cleanup criterion for 1,4-Dichlorobenzene	In progress	The ROD amendment will now be completed by May 2015.

Site Name: American Creosote Works (Pensacola, FL) **EPA ID#:** FLD008161994

RSE Report: EPA-540-R-06-068 (June 2006)

Recommendation	Status	Progress since the previous progress report
Remedy Effectiveness		
6.1.1 Continue revisiting soil cleanup levels and ACLs	In progress	EPA is in the process of finalizing the Focused FS for ACW. A sitewide ROD is scheduled for summer 2012. There are still discussions of where the low level dioxin impacted soil will be deposited (possible onsite and offsite locations).
6.1.2 Consider potential vapor intrusion	Implemented	
6.1.3 Revise program for determining GAC replacement	Implemented	An air stripper unit was added to the system. This unit will extend the lifetime of the GAC of the system. It is estimated that it will pay for itself in the first year of operation.
6.1.4 Evaluate options to implement stronger institutional controls	Under Consideration	EPA and FDEP are still looking into implementing institutional controls onsite. The development of groundwater ICs will require more investigation work. The ICs will be included in a sitewie ROD scheduled to be done by September 2012.
Cost Reduction		
6.2.1 Revise ground water sampling program	Alternative Implemented	
6.2.2 Review labor costs once system operation has stabilized	Implemented	
Technical Improvement		
6.3.1 Re-pipe DNAPL line from treatment shed to DNAPL storage tank	Implemented	
Progress Toward Cleanup Goals		
6.4.1 Modifications intended to gain site close-out	In progress	A sitewide ROD is scheduled for summer 2012. This ROD will revisit the site's groundwater remedy and possibly the cleanup goals. One of the possible remedies is a containment strategy utilizing a barrier wall around the DNAPL source area.

Site Name: **Cape Fear Wood Preserving (Fayetteville, NC)** **EPA ID#:** NCD003188828

RSE Report: EPA-542-R-05-005 (February 2005)

Recommendation	Status	Progress since the previous progress report
Remedy Effectiveness		
6.1.1 Install and sample a monitoring well downgradient of MW-16	Implemented	
6.1.2 Sample outer monitoring wells annually	Implemented	
6.1.3 Do not use water levels from operating recovery wells or infiltration galleries when generating potentio-metric surface maps	Implemented	
Cost Reduction		
6.2.1 Contract O&M services and ground water sampling to a local contractor	Implemented	
6.2.2 Eliminate select wells from monitoring program, and reduce sampling and reporting frequency to annually	Implemented	
Technical Improvement		
6.3.1 Consider alternatives before adding a sequestering agent	Implemented	
6.3.2 Reduce frequency of water level measurements, discontinue dissolved oxygen monitoring, and simplify O&M reporting	Implemented	
6.3.3 Add a suffix to well labels to indicate shallow and deep wells	Implemented	
Progress Toward Cleanup Goals		
6.4.1 Evaluate effectiveness of various remedy components	Alternative Implemented	

Site Name: **Cape Fear Wood Preserving (Fayetteville, NC)** **EPA ID#:** NCD003188828

RSE Report: EPA-542-R-05-005 (February 2005)

Recommendation	Status	Progress since the previous progress report
6.4.2 Considerations for evaluating thermal pilot study	Alternative Implemented	The thermal study was completed. The tech. memo evaluating the 3 scenarios was completed. The 3 scenarios evaluated include 1) STAR with ISCO (activiated persulfate), 2) steam injection with ISCO (activiated persulfate), and 3) stabilization on Site with thermal treatment along Reilly Road followed by ISCO ISCO (activiated persulfate). All three of these options would be followed by MNA. A final determination regarding changing the remedy and implement any of these alternatives has not been made at this time. The Site is on schedule to be transferred to the State for implementation LTRA of the existing remedy by July 2012. EPA is looking into the logistics of potentially changing the remedy in the near future.

Site Name: **Ott/Story/Cordova Chemical Co. (Dalton Township, MI)** **EPA ID#:** MID060174240

RSE Report: EPA 542-R-02-008s (March 2002)

Recommendation	Status	Progress since the previous progress report
Cost Reduction		
6.2.1 Replace DAS units with tray aerators or packed towers	Declined	
6.2.2 Reexamine NPDES permit and potentially bypass PACT system	Declined	
6.2.3 Reduce process monitoring and analysis	Implemented	
6.2.4 Reduce aquifer monitoring and analysis	Implemented	
6.2.5 Remove excess equipment and do not construct the planned storage building	Declined	
6.2.6 Evaluate potential reduction in onsite presence of USACE	Implemented	
6.2.7 Remove trailers from site	Implemented	
6.2.8 Have onsite staff conduct sampling for OU3	Alternative Implemented	
Technical Improvement		
6.3.1 Establish consistent sampling method	Implemented	
6.3.2 Modify program for water-level measurement	Implemented	
Progress Toward Cleanup Goals		
6.4.1 Establish agreement between the OU2 remedy and ROD	In progress	Consistent with the requirements of the 2007 Five Year Review, a "Remedial Strategy Analysis" continues. The transfer of portions of the LTRA to the State occurred on February 1, 2011. The State of Michigan identified numerous outstanding issues with the remedy. EPA continues to partner with the State to address remedy issues until cleanup goals are reached, including this RSE recommendation.

Site Name: **Douglas Road/Uniroyal, Inc., Landfill (St. Joseph County, IN)**

EPA ID#: IND980607881

RSE Report: EPA 542-R-04-031 (February 2004)

Recommendation	Status	Progress since the previous progress report
Remedy Effectiveness		
6.1.1 Sample extraction wells annually	Deferred to State or PRP	State has taken over monitoring as of November 2011.
6.1.2 Investigate off-site sources and remaining down-gradient impacts	Declined	
Cost Reduction		
6.2.1 Reduce analytical QA/QC	Deferred to State or PRP	
6.2.2 Consider converting cell 3 to an additional infiltration basin	Alternative implemented	
Progress Toward Cleanup Goals		
6.4.1 Develop an exit strategy	Deferred to State or PRP	State has assumed operation of remedy as of November 2011.

Site Name: **Reilly Tar & Chemical Corp. (Indianapolis, IN)** **EPA ID#:** IND000807107

RSE Report: EPA 542-R-04-035 (February 2004)

Recommendation	Status	Progress since the previous progress report
Remedy Effectiveness		
6.1.1 Install piezometers and monitoring wells to allow for improved evaluation of plume capture	Implemented	
6.1.2 Perform improved plume capture evaluation (Including numerical model)	In progress	PRPs have submitted outline of modeling effort--EPA to provide comments early 2012 for implementation.
6.1.3 Consider the need for a modified extraction system	Declined	
Cost Reduction		
6.2.1 Consider using extracted water for process and cooling uses	Declined	
Technical Improvement		
6.3.1 Minor suggestion for improved O&M reporting	Implemented	
Progress Toward Cleanup Goals		
6.4.1 Develop an exit strategy (consider alternate approach)	In progress	See update for recommendation 6.1.2. Updated modeling in 2012 will facilitate an exit strategy.

Site Name: **Peerless Plating (Muskegon, MI)** **EPA ID#:** MID006031348

RSE Report: EPA 542-R-06-011 (February 2006)

Recommendation	Status	Progress since the previous progress report
Remedy Effectiveness		
6.1.1 Evaluation of ground water capture	Implemented	A pumping wells was moved and pumping rates were adjusted to help address capture issues. Additional monitoring wells were installed to monitor capture.
6.1.2 Modifications to the monitoring program	Implemented	A monitoring well to address background concentrations was installed. The State installed 8 new monitoring wells to establish plume limits. The agency continues to monitor these new wells to determine if additional information will be required in the future. Low Flow sampling is used exclusively.
Cost Reduction		
6.2.1 Eliminate several ground water treatment processes	Implemented	The by pass system continues to operate and there is no update at this time.
6.2.2 Modifications to the monitoring program	Implemented	
6.2.3 Revise reporting requirements	Declined	
6.2.4 Review level of operator support	Implemented	
Technical Improvement		
6.3.1 Install dust collection system over FeSO4 hopper	Declined	
6.3.2 Install enclosure around air compressor to reduce noise	Declined	
6.3.3 Initiate a formal O&M program	Implemented	The formal O&M plan has been developed and will continue to be updated as required until the site activities are taken over by the State of MI.
6.3.4 Advertise availability of used equipment on USACE/EPA web page	Implemented	The contractor is currently solicity bids to dismantel and remove excess equipment from the Site.
Progress Toward Cleanup Goals		
6.4.1 Assess source area treatment alternatives	Declined	
6.4.2 Permeable barrier	Declined	

Site Name: **Baytown Township Ground Water Plume (Lake Elmo, MN)** **EPA ID#:** MND982425209

RSE Report: EPA-540-R-011-006 (June 2011)

Recommendation	Status	Progress since the previous progress report
Remedy Effectiveness		
6.1.1 Implement ISCO in Source Area	Under Consideration	The use of ISCO in the source area will be considered as part of an updated FS in early 2012. A work plan for the FS is currently under development.
6.1.2 Phased Implementation of ISCO, Tracer Test	Under Consideration	Aspects of this recommendation are in the process of being implemented, including the tracer test.
6.1.3 Consideration of In Situ Biological Treatment	Under Consideration	The use of in-situ bioremediation will be considered as part of the updated FS (see 6.1.1).
6.1.4 Potential Life Cycle Cost Savings Offered by Source Area Treatment	Under Consideration	This section of the RSE report did not contain a specific recommendation, rather it supports other items in 6.1.
6.1.5 Additional Source Area Assessment	In Progress	A work plan for implementing this recommendation is in preparation (see 6.1.1).
6.1.6 Performance-Based Contracting for Source Area Treatment	Under Consideration	This item will be considered in the future if source treatment is planned.
6.1.7 More Rigorous Evaluation of Hydraulic Barrier Capture Influence	In Progress	MPCA contractor is evaluating capture as part of Annual Report. Region 5 technical staff may be able to assist with this.
6.1.8 Improvements to the Monitoring Program	In Progress	MPCA is assessing trends, but will not implement a MAROS analysis.
Cost Reduction		
6.2.1 Reduce Blower Airflow Rate	Under Consideration	Contractor to MPCA is evaluating.
6.2.2 Adjustments to GAC Management Program	In Progress	One GAC unit has been replaced, and process is in place to require that new units exclude treatment of water delivered by exterior hose bibs.
6.2.3 Eventually Replace Class I, Division I Motors	Under Consideration	Applicable only in the future when equipment needs replacement.
6.2.4 Optimization of the Groundwater Monitoring Program	Implemented	Passive diffusion bags have been used in some monitoring wells, but not all.
Technical Improvement		
6.3.1 Use of More Rigorous MNA Modeling	Under Consideration	MPCA is planning additional MNA monitoring later in 2012.
6.3.2 Continue Evaluation of Groundwater Infiltration System Plugging	Implemented	Injection of CO2 continues and downhole camera work assesses need for well rehabilitation by jetting.

Site Name: **Baytown Township Ground Water Plume (Lake Elmo, MN)** **EPA ID#:** MND982425209

RSE Report: EPA-540-R-011-006 (June 2011)

Recommendation	Status	Progress since the previous progress report
6.3.3 Periodic Inspection of Electrical System and Controls	Implemented	MPCA contractor has conducted inspection and has incorporated this into standard site inspection process.
6.3.4 Optimize Process Flow Configuration for Air Stripping System	Declined	MPCA will not implement as it would require adding pumps.
6.3.6 Preparation of an Annual Report	Implemented	Modifications to the annual reports being prepared starting in 2011.
6.3.7 Improvement of Data Management	In Progress	MPCA has made some improvements, including use of the EQUIS database. EPA Region 5 offered assistance for this.
Progress Toward Cleanup Goals		
6.4.0 Implement ISCO, MNA Modeling, Capture Zone Analysis (see 6.1.1 above)	Under Consideration	See 6.1.1 above

Site Name: **Moss-American (Milwaukee, WI)** **EPA ID#:** WID039052626

RSE Report: EPA-540-R-11-018 (March 2011)

Recommendation	Status	Progress since the previous progress report
Remedy Effectiveness		
5.1.1 Monitoring program modifications	Planned	The State plans on getting a contractor on board later this year to develop and implement a work plan for further characterization, as recommended in 5.1.1 and 5.1.2. In addition, the contractor will be tasked with suggesting other alternatives to meet the objectives of the project.
5.1.2 Additional NAPL investigation	Planned	See notes above.
Cost Reduction		
5.2.1 NAPL-impacted soil excavation and enhanced dissolved-phase treatment	Under Consideration	Pending outcome of 5.1.1 and 5.1.2.
5.2.2 Limited NAPL-impacted soil removal and installation of additional treatment gate	Under Consideration	Pending outcome of 5.1.1 and 5.1.2.
5.2.3 Ground Water Flow Modification to Enhance Treatment of Existing Funnel and Gate System	Declined	The site team has deemed this item ineffective and not a viable path forward.

Site Name: **Wash King Laundry (Pleasant Plains Township, MI)** **EPA ID#:** MID980701247

RSE Report: EPA-540-R-11-019 (February 2011)

Recommendation	Status	Progress since the previous progress report
Remedy Effectiveness		
6.1.1 Sample P&T Discharge and Residential Wells for Lead	Implemented	The site team actually started implementing this the year before the RSE.
6.1.2 Complete Institutional Controls	In Progress	The site team has determined that institutional controls are not needed at four of the eight properties. EPA and the State are discussing institutional controls for the other four properties. In the interim, the Health Department, which has the authority to permit supply wells, will not allow wells in the area.
6.1.3 Jet EW-5 and Measure/Track Extraction Well Specific Capacity	Implemented	The site team jetted the well, but jetting did not result in sufficient improvements. The well needed to be replaced. The site team replaced the well with a well (EW-8) in a new location upgradient.
6.1.4 Evaluate and Manage Soil Vapors	Alternative Implemented	The site team evaluated the potential for vapor intrusion at the restaurant building and concluded that given the condition of the building and no occupancy of the building, vapor intrusion was not a concern. The site team, however, decided to keep operating the SVE system occasionally to reduce vapors that accumulate in the unsaturated zone.
Cost Reduction		
6.2.1 Discontinuing Pumping from EW-4	Implemented	The site team implemented this recommendation.
6.2.2 Reduce Metals Analysis	Alternative Implemented	The site team did not reduce the types of analyses, but did reduce some of the locations where metals would be analyzed.
6.2.3 Reconfigure Air Strippers and Possibly Resize Air Stripper Blowers	In Progress	Given the flow from the new extraction wells and the capacities of the air strippers, both air strippers are needed. At the suggestion of the RSE team, the site team will revisit discussions with the vendors to see if the blower sizes can be reduced from 25 HP or variable frequency drives can be installed to reduce air flow and electricity usage and still provide adequate treatment.
6.2.4 Modify Groundwater Monitoring Program	Implemented	The site team adopted most of the RSE team's suggestions for modifying the groundwater monitoring program. The site team agrees that savings is likely on the order of $30,000 per year.
6.2.5 Prepare an Annual Report	Declined	An additional annual report will not be implemented at this time given the existing quarterly reporting and other recent reporting including two Five-Year Reviews, a Long-Term Monitoring Optimization Report, and the RSE report.

Site Name: **Wash King Laundry (Pleasant Plains Township, MI)** **EPA ID#:** MID980701247

RSE Report: EPA-540-R-11-019 (February 2011)

Recommendation	Status	Progress since the previous progress report
Progress Toward Cleanup Goals		
6.4.1 Investigate Sources in Lagoon Area and Piping to Former Lagoons	In Progress	The site team has installed a shallow, intermediate, and deep well in the general vicinity and has identified contamination. EPA Region 5 and the State continue to discuss the path forward for the site.
6.4.2 Develop an Exit Strategy	In Progress	The site team has installed a shallow, intermediate, and deep well in the general vicinity and has identified contamination. EPA Region 5 and the State continue to discuss the path forward for the site.
Green Remediation		
6.5.1 Use Dedicated Tubing	Declined	The potential savings (cost and environmental) do not outweigh the field complications associated with implementing this recommendation.
6.5.2 Considerations for Renewable Energy at the Site	Declined	The site team has not considered renewable energy for the site. The RSE team suggests understanding the future electricity usage (after air stripper optimization) prior to considering renewable energy.

Site Name: **57th and North Broadway (Wichita, KS)** **EPA ID#:** KSD981710247

RSE Report: EPA-540-R-06-067 (June 2006)

Recommendation	Status	Progress since the previous progress report
Remedy Effectiveness		
6.1.1 Perform additional source area characterization	Implemented	
6.1.2 Consider contingent wellhead treatment at the public water supply well	Implemented	
6.1.3 Consider change to P&T after source characterization, in 53rd Street area	In progress	The status is about the same, we've conducted new investigation in December 2011 and obtained additional data for the installation of the extraction well. We have had some issues with the state which delayed this work. Things are progressing better now and hopefuly move forward after we get these latest results.
6.1.4 Evaluate whether extent of SVE system is adequate	Implemented	
6.1.5 Consider using air sparging with existing SVE	Declined	
6.1.6 Continue monitoring of sentinel wells in Bel Aire well field	Implemented	
6.1.7 Evaluate potential for vapor intrusion	Implemented	
Cost Reduction		
6.2.1 Consider immediately taking eastern 53rd Street DDC wells out of operation	Implemented	
6.2.2 Consider better tracking of routine and non-routine site costs	Implemented	
Technical Improvement		
6.3.1 Prepare and distribute annual monitoring reports	Implemented	
6.3.2 Improve site maps	Implemented	
6.3.3 Report detection levels for 'non-detect' results	Implemented	

Site Name: **57th and North Broadway (Wichita, KS)** **EPA ID#:** KSD981710247

RSE Report: EPA-540-R-06-067 (June 2006)

Recommendation	Status	Progress since the previous progress report
Progress Toward Cleanup Goals		
6.4.1 Clarify and document date for turnover to State for O&M	In progress	The status is still the same, we have conducted additional investigations in December 2011 and will modify the current remedy by installing an extraction well and some soil removal. After the remedy is operational and effective, the site will be turned over to the state.
6.4.2 Develop consensus on terminating SVE at Wilko	Implemented	

Site Name: 10th Street Site (Columbus, NE) **EPA ID#:** NED981713837

RSE Report: EPA 540-R-10-012 (February 2010)

Recommendation	Status	Progress since the previous progress report
Remedy Effectiveness		
6.1.1 Evaluate the Need for Further Evaluation of Potential for Vapor Intrusion Near OHM Facility	Implemented	Two new rounds of vapor intrusion sampling were conducted in 2010, and four more rounds were conducted in 2011. Indoor air samples have been below screening levels, but sub slab samples had exceedances. A soil vapor investigation was conducted in and around the source areas. The site team is moving forward with vapor intrusion mitigation systems at 17 properties in early 2012.
6.1.2 Discontinue Pumping at EW-04 and Shift Pumping West to EW-03	Under Consideration	Pumping continues at EW-04 and will be reevaluated after the flow model is updated. The capacity of EW-03 has been increased to the maximum extent possible. The modeling was delayed due to delays in obtaining access for the installation of piezometers. The modeling should be completed in the next month or two allowing for consideration of the discontinuing pumping from EW-04.
6.1.3 Address Calibration Issues with the Flow Model	In progress	The Region is planning to update the flow model after conducting pump tests at EW-03 and EW-04. The modeling was delayed due to delays in obtaining access for the installation of piezometers. The modeling should be completed in the next month or two.
6.1.4 Address Potential Plume Migration to the Southeast (Delineation and ICs) and Associated Potential Actions	Implemented	Twelve new wells have been installed for this purpose. The new monitoring wells have non-detect results and effectively delineate the plume.
Cost Reduction		
6.2.1 Discontinue ISCO After Contract is Completed	Implemented	ISCO injections have been discontinued; the last round was in 2009.
6.2.2 Continue to Use PDBs Without Extensive Comparisons	Implemented	The site team continues to use PDBs where they correlated well with low-flow sampling results and do not use PDBs where they did not correlate well with low-flow sampling. No further comparison studies are being conducted.
6.2.3 Reductions in Monitoring/Reporting	Implemented	Reductions in monitoring/reporting were included in the contract modification, including cutting back to semi-annual sampling and sampling at fewer wells. In 2010, monitoring and reporting cost an estimated $247,465. Actual monitoring and reporting costs in 2011 were lower than expected and actual monitoring and reporting in 2012 are $124,000 (suggesting a cost reduction of 50% and a cost savings of $124,000 per year).

Site Name: 10th Street Site (Columbus, NE) **EPA ID#:** NED981713837

RSE Report: EPA 540-R-10-012 (February 2010)

Recommendation	Status	Progress since the previous progress report
6.2.4 Project Management and Technical Support Moving Forward	Implemented	The RSE team's recommendations have been implemented, which has led to significant cost reduction (approximately $190,000). Most cost savings are associated with shifting focus to evaluate other remedial options rather than optimize the AS/SVE system. Earlier costs were incurred for the ART well and groundwater recirculation pilot studies, which were evaluated as potential enhancements to the AS/SVE system. Project management and reporting costs are expected to stay steady at the reduced level in 2011 and 2012.
Technical Improvement		
6.3.1 Measure and Track Specific Capacity of Wells	Implemented	Specific capacity of wells was calculated for the 2009 Annual Report and will be calculated for the 2010 Annual Report. There will not be a significant increase in effort or cost associated with these calculations.
6.3.2 Consider VFDs for Extraction Well Pumps	Declined	VFDs had been looked at during design, but were ruled out because they would not lead to a significant cost impact.
Progress Toward Cleanup Goals		
6.4.1 Consider Alternate Actions at OHM Facility	Implemented	The site team is focusing on pinpointing the source, determining the best way to treat source area contamination, and reducing the amount of O&M and pumping time needed. Soil investigations at the OHM facility and two other dry cleaners to the south indicate that higher levels of contamination exist below the other two buildings.
6.4.1 Consider Alternate Actions at OHM Facility	Implemented	The site team prepared a Focused Feasibility Study, and a ROD Amendment and a Remedial Design start are planned by the end of the 3rd quarter of 2012.

Site Name: **Central City/Clear Creek, Argo Tunnel (Idaho Springs, CO)** **EPA ID#:** COD980717557

RSE Report: EPA-542-R-07-019 (September 2007)

Recommendation	Status	Progress since the previous progress report
Remedy Effectiveness		
6.1.1 Evaluate and decide on need for blowout prevention	In progress	An entry into the Argo Tunnel occured on 5/3/2011. The entry team only made it in about 125 feet due to sediment buildup. A conceptual design was prepared and submitted to the State and EPA in November 2011. It estimated the cost of construction for a bulkhead at $413,000. The State is preparing a Request for Qualifications to hire a design engineer.
6.1.2 Evaluate importance of complete collection and treatment of the Virginia Canyon ground water	Implemented	No further comment.
6.1.3 Evaluate indoor air quality for metals and confirm medical monitoring for plan workers	Implemented	
Cost Reduction		
6.2.1 Install new filter presses	In progress	The State has amended the contract with the engineer to design the conversion of the process to a HDS system. The additional design cost is $363,800. The design is approximately 60% complete. The estimated construction cost has increased to $2,550,000. Once design is complete, the State will request funds to construct the process modifications.
6.2.2 Realize savings from improved operations	Alternative Implemented	No further comment.
6.2.3 Improve metals treatment by solids recycling	In progress	See update in 6.2.1.
Technical Improvement		
6.3.1 Reduce discharge of recycled solids and high pH water to equalization basins	Implemented	No further comment.
6.3.2 Improve lime feed system	Alternative Implemented	No further comment.
6.3.3 Provide additional compressed air capacity	Under Consideration	The design for conversion to a HDS system includes installation of a blower to provide aeration to the process. If the conversion is implemented, additional compressed air capacity will likely not be required.
6.3.4 Reduce solids wasting flow rate	Alternative Implemented	

Site Name: **Central City/Clear Creek, Argo Tunnel (Idaho Springs, CO)** **EPA ID#:** COD980717557

RSE Report: EPA-542-R-07-019 (September 2007)

Recommendation	Status	Progress since the previous progress report
6.3.5 Consider construction of an on-site solids disposal repository as a contingency to disposal at a landfill	In progress	See update in 6.2.1
6.3.6 Additional improvements	In progress	The additional permanent lime storage is still on hold because they have lower funding priority than the other items.

Site Name: **Modesto Ground Water Contamination (Modesto, CA)** **EPA ID#:** CAD981997752

RSE Report: EPA-542-R-02-008o (December 2001)

Recommendation	Status	Progress since the previous progress report
Remedy Effectiveness		
6.1.1 Monitor subsurface performance of SVE system	Implemented	
6.1.2 Assign responsibility for evaluating monitoring and performance data	Implemented	
6.1.3 Analyze capture zone	Implemented	
6.1.4 Delineate plume (if necessary)	Implemented	
Cost Reduction		
6.2.1 Consider alternate discharge locations - Discharge to storm sewer - Reinject to subsurface	Declined	
6.2.2 Simplify system (remove equalization tank, simplify filtration system, and remove transfer pump)	Implemented	
6.2.3 Regularly evaluate need for ion exchange units	Implemented	
Technical Improvement		
6.3.1 Relocate vacuum breaker	Implemented	
6.3.2 Install valving for backwashing carbon and ion exchange units	Implemented	
6.3.3 Monitor extraction well performance	Implemented	
6.3.4 Modify SVE system to address high operating temperatures	Declined	
6.3.5 Regularly evaluate need for vapor phase carbon	Declined	
6.3.6 Properly convert PID readings to PCE concentrations	Implemented	
6.3.7 Improve accuracy of SVE flow	Implemented	
6.3.8 Adjust membrane around Baker tank	Alternative Implemented	

Site Name: **Modesto Ground Water Contamination (Modesto, CA)** **EPA ID#:** CAD981997752

RSE Report: EPA-542-R-02-008o (December 2001)

Recommendation	Status	Progress since the previous progress report
6.3.9 Improve drainage to secondary sump	Implemented	
6.3.10 Add fans to the control panel	Implemented	
6.3.11 Relocate vapor phase carbon for the groundwater treatment system	Implemented	
6.3.12 Add phone line for data acquisition	Implemented	
Progress Toward Cleanup Goals		
6.4.1 Initiate screening of final remedy	In progress	Discovery of possible new source area requires additional investigation and will delay the FS and selection of final remedy.
6.4.2 Measure DO and ORP in monitoring wells	Implemented	

Site Name: **Pemaco Maywood (Los Angeles County, CA)** **EPA ID#:** CAD980737092

RSE Report: EPA-540-R-11-005 (July 2011)

Recommendation	Status	Progress since the previous progress report
Remedy Effectiveness		
6.1.1B Add monitoring well in D-zone	Planned	The site team is planning to install a new D-zone monitoring well by April 2012. The cost for the new well is expected to be $37,200 which is $17,200 more than the RSE estimate.
6.1.1A Potentially add pumping or monitoring wells in C-zone.	Implemented	The site team converted a C-zone monitoring well into an extraction well to increase pumping.
6.1.2 Collect vapor sample from trunk line VE-1 to assess vapor intrusion risk	Implemented	The site team sampled all 7 of the wells along the VE-1 line (as well as the 48 vapor extraction wells). The sampling indicated that vapor intrusion is not an issue in this location. The sampling cost about $5,000 which is within the $15,000 RSE estimate that included contingent sampling.
Cost Reduction		
6.2.1 Reduce monitoring well sampling from 374 to 192 or fewer samples per year.	Implemented	The site team reports that sampling has been reduced from 432 wells costing $442,800 per year to 206 samples per year (73 wells sampled semiannually and 15 wells sampled quarterly). The site team projects a savings of about $230,000 per year associated with this reduction; this is more than the $145,000 or greater savings estimated in the RSE because the original number of samples had been underestimated in the RSE.
6.2.2 Reduce process sampling of water from about 120 to fewer than 52 per year and vapor from 168 to fewer than 40 per year	Implemented	On the call, the site team reported that they are currently evaluating the recommended reduction to eliminate sampling influent headers and intermediate process locations that are not useful for system operation decisions. Since the call, the site team further evaluated reducing process sampling and has reportedly decided to eliminate all sampling of influent headers and intermediate process locations for both vapor and groundwater, as per RSE recommendations. As of this date, only combined influent and effluent samples will be collected monthly at a potential savings of about $54,000 per year in labor and ODC costs.
6.2.3 Reduce vapor extraction points (SVE and DPE) from about 55 to about 25. Rebound test well groups. Reduce groundwater extraction points from about 56 to about 24 (including 3 DPE points). Reduce blower use. Simplify system.	Implemented	The site team has reduced operating vapor extraction wells to 16 and reduced groundwater pumping to 29 wells (including 6 DPE wells) at a 17 gallon per minute total flow rate. The system has been operated with one blower for an estimated $40,000 annual power cost savings. The site team will consider performing rebound sampling only on well groups, as recommended in the RSE, at an expected savings of $28,000. The site team already considered using an existing "polishing blower" once DPE wells are no longer in use, but determined it would not produce the necessary vacuum. The design engineer will consider using a smaller blower (37 hp) to replace the currently operating (75 hp) liquid ring blower. He will also consider how to simplify the control system and enhance the efficiency of the bag filtration system to reduce labor costs.

Site Name: **Pemaco Maywood (Los Angeles County, CA)** **EPA ID#:** CAD980737092

RSE Report: EPA-540-R-11-005 (July 2011)

Recommendation	Status	Progress since the previous progress report
6.2.4 Reduce operator labor to one FTE or less. Eliminate manned off-hour security.	In progress	The site team reports that they have reduced plant personnel from three full-time to two full-time and one part-time staff at a savings of about $36,000 per year based on the $820,000 per year costs reported during the RSE and the $392,000 for six months of O&M reported for the follow-up call. Further reductions have not been made due to the high volume of maintenance, the frequency of process data collection which has not been reduced, and site policy of having 2-person crews perform O&M. Off-hour security also remains because of concerns regarding vandalism and other crime in the area. The site team is currently evaluating other methods for achieving adequate security without manned personnel. In addition, the team is looking at ways of further reducing operator labor, as suggested by the RSE.
6.2.5 Reduce project management costs.	In progress	The RSE recommendation was to reduce project management (including technical support and reporting) costs in line with the simplified system and reduced monitoring from about $400,000 per year to achieve costs of $150,000 per year or less.The site team notes that ongoing costs were reduced in the second half of 2011 and optimization efforts continue. Project management costs were about $152,000 for the second half of 2011 or about $304,000 per year.
Technical Improvement		
6.3.1 Improve reporting	Implemented	The site team noted that the reporting improvements began with 2011 reports and represent a $60,000 portion of the project management costs.
Progress Toward Cleanup Goals		
6.4.1 Establish SSRLs for determination of SVE well closures and resample at baseline locations for remediation confirmation	Implemented	The site team is currently using a total VOC level of about 100 ppbv to decide vapor extraction well status and agreed that a more formal standard would be useful for further decisions. The site team resampled the baseline locations and found only three locations above action levels.
Green Remediation		
6.5.0 Use local staff for groundwater monitoring	Declined	The site team reported that staff from San Diego (rather than northern California as reported in the RSE) are conducting the monthly process sampling.

Site Name: **Northwest Pipe & Casing (Clackamas, OR)** **EPA ID#:** ORD980988307

RSE Report: EPA 542-R-07-018 (September 2007)

Recommendation	Status	Progress since the previous progress report
Remedy Effectiveness		
6.1.1 Improve delineation of Plume 1 to the south	Implemented	
6.1.2 Finalize institutional controls (ICs) on Parcel A	Implemented	ICs were finalized for the Northwest Development Company portion on Parcel A in October 2010.
6.1.3 Continue/conclude efforts to evaluate potential for vapor intrusion on Parcel A	Implemented	There are no outstanding issues concerning the Vapor Intrusion issue at the ODOT property. Vapor Intursion Risk Assessment found risk to within the acceptable range.
Cost Reduction		
6.2.1 Eliminate operation of GCWs	Implemented	
Technical Improvement		
6.3.1 Revise sequencing for collecting site-wide water level data	Implemented	
Progress Toward Cleanup Goals		
6.4.1 Clarify and document goals for active remediation	In progress	The site team continues to monitor removal action, will be completing modeling to help determine how to proceed. Modeling should be completed by 4th quarter FY12.
6.4.2 Implement in-situ bioremediation to reduce highest VOC concentrations, in conjunction with natural remediation	In progress	FS will be completed in FY 2012, expect ROD amendment by end of 2013, based on the removal action and the addition of the soil ammendment it is unlikely that additional action will occur at the site except for monitoring.

Site Name: **Boomsnub/Airco (Hazel Dell, WA)** **EPA ID#:** WAD009624453

RSE Report: EPA-542-R-02-016 (September 2002)

Recommendation	Status	Progress since the previous progress report
Remedy Effectiveness		
6.1.1 Conduct a hydro-geological analysis	Implemented	
6.1.2 Evaluate potential management options for extraction and discharge	Implemented	
6.1.3 Considerations for potential extraction and discharge options	Implemented	
6.1.4 Consider other discharge options	Implemented	
Cost Reduction		
6.2.1 Eliminate ion exchange effluent tank and pump	Implemented	
6.2.2 Improve electric work for air stripper	Implemented	
Technical Improvement		
6.3.1 Consider limitations of passive technologies	Implemented	
6.3.2 Develop an exit strategy	In progress	We are addressing an orphan in-coming TCE plume that does not appear to be related to the sources of the Superfund site. This is delaying the finalization of an exit strategy.

Site Name: **Wyckoff/Eagle Harbor (Bainbridge Island, WA)** **EPA ID#:** WAD009248295

RSE Report: EPA-542-R-05-013 (March 2005)

Recommendation	Status	Progress since the previous progress report
Remedy Effectiveness		
6.1.1 Select a final remedy	Implemented	Groundwater extraction system upgrades were completed in Fall 2011. Upgrades include new extraction well pumps and installation of groundwater level pressure transducers. Shakedown process of GWTP will be completed in Winter 2012. Operation and maintenance of GWTP will be turned over to the State of Washingon in April 2012, for at least a period of years while EPA works on feasiblity analysis of completing the permanent remedy.
Cost Reduction		
6.2.1 Simplify existing treatment plant	Implemented	Completion of new GWTP made old treatment plant obsolete. Old treatment plant is being demolished as of Winter 2011.
6.2.2 Install upgradient sheet pile	Declined	Fieldwork has indicated that aquitard is not present in the SE corner of the site. Groundwater evaluations has shown that a sheet pile wall is not necessary to ensure that containment is maintained in this portion of the site.
6.2.3 Remove steam injection/ extraction system and apply cap	Planned	Cap design and construction is still on hold pending completion of feasiblity analysis of implementing a permanent source removal remedy. Demolition of old groundwater treatment plant completed in July 2011. Demolition of remaining existing infrastructure (steam injection well field) is also on hold.
6.2.4 Conduct water budget analysis	Implemented	
6.2.5 Upgrade extraction system	Implemented	Replacement of existing product and water pumps and installation of pressure transducers in monitoring wells completed in Fall 2011.
6.2.6 Replace the existing treatment plant	Implemented	Construction of new GWTP was completed in May 2009. Old treatment plant is being demolished as of winter 2011.
6.2.7 Augment monitoring in lower aquifer	Implemented	
Technical Improvement		
6.3.0 Other related items - Improve monitoring approach - Monitor seeps on beach - Consider new extraction points	Planned	Further seep monitoring along East Beach and North Shoal areas of site is currently being planned for Spring 2012.

Site Name: **Colbert Landfill (Spokane County, WA)** **EPA ID#:** WAD980514541

RSE Report: EPA-540-R-11-020 (October 2010)

Recommendation	Status	Progress since the previous progress report
Remedy Effectiveness		
6.1.1 Add Monitoring Well West of CP-W3	Planned	The County plans to implement this recommendation, and will include this new monitoring well in the work plan to be submitted for the P&T shut-down test. The work plan is expected in the spring of 2012, with well installation potentially in summer of 2012.
6.1.2 Include 1,4-Dioxane in Future Residential Sampling (At Some Frequency)	Planned	The County plans to include 1,4-Dioxane in future residential sampling using the same methodology employed for residential sampling of other site COCs.
6.1.3 Tighten Institution Controls Regarding Groundwater Use and Document Approach Regarding 1,4-Dioxane Detections	Under Consideration	The RPM indicated that he plans to discuss the adequacy of the existing institutional controls with an attorney within approximately one month, and hopes to have that legal opinion within the next three months. To date there is no cost impact associated with this recommendation, and the extent to which any costs are incurred will likely depend on the information provided by the EPA attorney.
Technical Improvement		
6.3.1 Modifications to Water Level Maps	Implemented	The County indicated that the number of locations is too numerous to post, but is now including all data collected during the reporting period. The County indicated there is no need to highlight water levels from extraction wells since those are not used in the contouring. There should be no cost impact associated with the implementation of this recommendation.
6.3.2 Other Suggested Modifications to Quarterly Reports	Implemented	The recommendation that non-detect values be reported as below a specific detection limit such as "<5" rather than "ND" has been implemented, and the recommendation that quarterly reports include an executive summary to highlight significant observations or results from that quarter is planned for future reports. There should be no cost impact associated with the implementation of this recommendation.
Progress Toward Cleanup Goals		
6.4.1 Consider Shut-Down Test of Remaining Active Extraction Wells	In Progress	The County has accepted this recommendation and plans to submit a draft work plan for the shut-down test in spring of 2012 to be reviewed by stakeholders, with potential implementation in summer of 2012.