



**MARJOL BATTERY SITE
QUARTERLY PROGRESS REPORT
NO. 15**



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QUARTERLY PROGRESS REPORT
NO. 15**

Prepared For:

**GOULD ELECTRONICS
Eastlake, Ohio**

Prepared By:

**ADVANCED GEOSERVICES
West Chester, Pennsylvania**

**May 14, 2010
Project No. 92-002-230**

CERTIFICATION STATEMENT

I certify that the information contained in or accompanying Quarterly Progress Report No. 15 dated May 14, 2010 for the Marjol Battery Site in Throop, Pennsylvania is true, accurate and complete.

As to those portions of Quarterly Progress Report No. 15 for which I cannot personally verify their accuracy, I certify under penalty of law that this and all attachments were prepared in accordance with procedures designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, or the immediate supervisor of such person(s), the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibilities of fines and imprisonment for knowing violations.

SIGNATURE:

Thomas N. Rich

NAME:

Thomas N. Rich

TITLE:

Chief Administrative Officer

DATE:

May 14, 2010



QUARTERLY PROGRESS REPORT NO. 15 MARJOL BATTERY SITE

DATE: May 14, 2010 92-002-230

REPORTING PERIOD: First Quarter 2010 (January 1 to March 31)

This document was prepared to satisfy quarterly progress reporting requirements in the Final Administrative Order on Consent (AOC) U.S. EPA Docket No. RCRA-03-2006-0041 CA effective July 13, 2006 between the United States Environmental Protection Agency (USEPA), Pennsylvania Department of Environmental Protection (PADEP) and Gould Electronics Inc. (Gould).

ACTIONS DURING FIRST QUARTER 2010

PERMITTING AND DESIGN

The following activities were accomplished during First Quarter 2010:

- On January 7, 2010, Gould obtained an extension from Throop Borough's Zoning Officer for the Throop Borough fence, building and trailer permits. The extension was granted through the end of 2010.
- On March 23, 2010, USEPA and PADEP approved the Revised Cost Estimate through December 31, 2009, which included a proposed additional deposit of \$1,364,029.68 to the trust.

Table 1 provides the status of permit applications. Table 2 provides a summary of design addenda and permit modifications.

CORRECTIVE MEASURES CONSTRUCTION

The following activities were accomplished during First Quarter 2010:

- CMX Engineering was onsite intermittently during the First Quarter to continue survey control.
- Temporary stabilization activities were continued throughout the quarter during the winter shutdown as weather and Site conditions allowed.
 - Jute mat installation on slopes within the CA and on the CA berm.
 - Repair of erosion rills.



- Dewatering of the sediment basin through the skimmer and outlet structure was conducted following the proper procedures, including turbidity testing and sampling, as outlined in the Sampling and Analysis Plan.
- SCE conducted weekly erosion and sediment inspections as well as weekly inspections of the geosynthetics stockpiles to ensure that all materials were covered properly. SCE provided weekly reports and pictures to Advanced GeoServices which were uploaded to the portal.
- On Tuesday January 19, 2010, the Drum Construction support trailer was demobilized from the Site.
- SCE reported to the Site and made emergency repairs to the skimmer on January 25, 2010. Due to ice build up and thaw, the skimmer head detached from the arm, and turbid water from the bottom of the basin was discharged. The skimmer arm was propped up to prevent flow until the skimmer head could be reattached using PVC cement.
- SCE reported to the Site to complete corrective measures throughout the quarter as requested by AGC.
 - The silt fence around the cap cover stockpile was repaired on several occasions prior to SCE placing a rip rap berm in front of the silt fence in the area of concern.
 - Repairs to the perimeter site fence were made due to damage caused by high winds.
 - On March 14, 2010, SCE reported to the Site as requested for corrective measures to the discharge channel and sediment basin after a storm event. Silt socks were installed along the fence line and flocculant was added to the discharge channel and the basin to control the turbidity.
- SCE resumed water management activities in the sediment basin in preparation for sediment removal and sampling within the basin during the week of March 22, 2010. A pumping system was reestablished along the northern section of the basin in order to pump the water within the basin through a filter bag to Areas A and B.

Items provided on the web portal including construction schedules, weekly inspection reports, and meeting minutes, are provided on the enclosed CD.

QUALITY ASSURANCE

The following activities were accomplished during First Quarter 2010:

- The Revised Stained Soils Investigation Report was submitted on January 15, 2010. The report is provided on the enclosed CD.



- AGC personnel continued to monitor Site activities throughout the quarter that were completed as weather and Site conditions allowed.
- The frequency of erosion and sediment control inspections was reduced to weekly due to winter-related safety hazards. Weekly erosion and sediment control inspections were conducted during the winter shutdown. Inspections of the geosynthetics stockpiles were also included on the checklists. Weekly perimeter fence inspections were also conducted. Any issues or need for corrective actions were reported to SCE immediately.
- Advanced GeoServices conducted turbidity readings within the sediment basin as needed during the quarter.
- Advanced GeoServices reviewed corrective actions within the discharge channel based on increased turbidity readings. Silt socks, flocculant tubes, hay bales, and flocculant were added to the channel throughout the later part of the quarter in order to promote settlement of sediment particles in the discharge channel prior to exiting the Site.
- On January 4, 2010, Advanced GeoServices contacted Lackawanna County Conservation District (LCCD) regarding the proposed basin sediment removal plan. LCCD indicated the sediment removal was not an NPDES permit concern as the basin is functioning as designed and provides normal sediment retention for the Site.

Items provided on the web portal including weekly QA reports and photographs are provided on the attached CD.

MONITORING

The following activities were accomplished during First Quarter 2010:

- Weekly air monitoring continued at the Site, and the results show that the ambient air lead levels are well below the National Ambient Air Quality Standard of 0.15 $\mu\text{g}/\text{m}^3$. The Fourth Quarter 2009 Ambient Air Monitoring Report is provided on the enclosed CD. PADEP continues to periodically split samples with AGC at high volume sampler locations #1 and #4. No PADEP air sampling results have been received during the first quarter of 2010.
- Real-time aerosol (dust) monitoring was not conducted during First Quarter 2010 as no work activities involving contaminated materials occurred.
- No Personal air monitors (PAMs) were collocated with real-time dust monitors during First Quarter 2010.



- On February 2, 2010, Advanced GeoServices personnel collected First Quarter 2010 sediment samples as part of the Final (100%) Design Sampling and Analysis Plan. The sampling consisted of one composite sample and one field duplicate of the original locations 3, 6, 7, and 8. The sample results of 28.7 mg/kg and 31.4 mg/kg, respectively, were less than the calculated 95th upper confidence limit of the mean (52 mg/kg) for historic sample results at the mouth of Sulphur Creek. Surface water discharges from the site occurred this quarter as discussed in the Discharge Monitoring Reports. The First Quarter 2010 Sediment Sampling Report is provided on the enclosed CD.
- The report on the Off-Site Verification Testing dated February 15, 2010 was submitted as an attachment to the Fourth Quarter 2009 quarterly report.
- Discharge occurred from the Proposed Sediment Basin during First Quarter 2010 as discussed in the Discharge Monitoring Reports (DMR) for January, February and March 2010. Off-site discharges that were compliant with NPDES Permit No. PAI023508001 occurred on January 26, 27, and 28, and March 8, 9, 10, 11, 13, 15, 16, 23, and 24, 2010. Non-compliant discharges occurred on January 25 and March 14 and 31, 2010. Total and dissolved lead levels were well below the performance standard in these discharges and were compliant with the permit, however. Non-compliant discharge reports were submitted on February 1, March 19, and April 6, 2010. Separation of the skimmer head from the skimmer arm, separation of the skimmer arm from the outlet structure and accumulation of sediment in the basin and the discharge channel are all thought to have contributed to the non-compliant discharges. The issues have since been addressed through repairs to the skimmer, removal of sediment in the channel and the basin and stabilization of the discharge channel. Runoff carrying sediment derived from the solidified layer on the Containment Area may also have contributed since this layer is comprised of fine-grained soils mixed with lime kiln dust. This issue is being addressed by capping the solidified surface with geosynthetics. The DMRs are included in the First Quarter 2010 Sediment Sampling Report.
- Precipitation for January, February, and March 2010 was 1.69", 0.94", and 4.21" respectively, mostly in the form of rain.
- No 10-year storms (3.68 inches of rainfall within a 24-hour period) occurred during the first quarter.
- Site weather data was placed on the web portal. Weather data is provided on the enclosed CD. The weather station was not operating January 1 through January 5, 2010.



SITE MAINTENANCE

The following activities were accomplished during First Quarter 2010:

- A weekly perimeter inspection was conducted by AGC and SCE.
- From January 1, 2010 to January 24, 2010, site security was provided by Securitas Security (f/k/a Burns Security).
- SCE assumed the role of guard services beginning at 0700 on Monday, January 25, 2010. An SCE-appointed guard was onsite during daylight hours seven days a week throughout the remainder of the quarter.

COMMUNITY RELATIONS

The following activities were accomplished during First Quarter 2010:

1. Throughout the first quarter 2010, Gould's web site, <http://www.marjolcleanup.com>, for the Marjol Battery Site was updated regularly with air monitoring data, photos, the construction schedule, turbidity data, and other site information. A notification was sent to those individuals who signed up for web-site update notices each time the web site was updated.
2. Throop Borough, Cocciardi & Associates (Cocciardi), USEPA, and PADEP were kept informed regarding the status of work activities at the Marjol Site throughout the first quarter 2010 via e-mail.
3. Lisa Ayers attended Throop Borough Council's Re-Organizational Meeting on January 4, 2010. The newly elected Council members and the Mayor were sworn in during this meeting.
4. On January 11, 2010, AGC attended Throop Borough's Special Monthly Work Session and Council Meeting. (See notes from the council meeting attached.)
5. On January 16, 2010, a copy of the Stained Soils Report was provided to Throop Borough and to Cocciardi & Associates (Cocciardi).
6. On January 18, 2010, Throop Borough was notified that beginning that day, there would only be guard service at the Site during daylight hours.
7. On January 21, 2010, Throop Borough was notified that SCE would be taking over guard service at the Site during the winter shut-down period beginning January 25, 2010. A follow-up memo was sent to Throop Borough Council on January 22, 2010.



8. On January 25, 2010, AGC notified Throop Borough and Cocciardi of stormwater discharge from the sedimentation basin that was above the turbidity performance standard. Information regarding the discharge was also posted on the web site.
9. On January 25, 2010, AGC attended Throop Borough's Monthly Work Session and Council Meeting. (See notes from the work session and from the meeting attached.)
10. On February 1, 2010, AGC attended a Special Public Meeting hosted by Throop Borough to discuss uses for the Borough's 48-acre property. (See notes attached.)
11. On February 2, 2010, AGC provided Throop Borough with a copy of the Non-Compliance Report for the discharge event on January 25, 2010, that was submitted to PADEP.
12. As requested, on February 5, 2010, AGC provided a map showing Gould's properties and the Borough's 48-acre property along the Lackawanna River to the editor of the Valley Advantage newspaper.
13. On February 8, 2010, AGC attended a second Special Public Meeting hosted by Throop Borough to discuss uses for the Borough's 48-acre property. (See notes attached.)
14. On February 8, 2010, AGC attended Throop Borough's Special Monthly Work Session and Council Meeting. (See notes from the council meeting attached.)
15. On February 22, 2010, off-site verification sampling result letters were sent to the property owners of the properties located on Martarano Drive, the corner of Franko and Delaware Streets, and the property west of Franko Street.
16. On February 22, 2010, AGC attended Throop Borough's Monthly Work Session and Council Meeting. (See notes from the council meeting attached.)
17. As requested, on February 24 and 26, 2010, sampling data for 916 Franko Street was provided to the prospective property owner.
18. As requested, on March 4, 2010, sampling data for 916 Franko Street was provided to PADEP.
19. On March 8, 2010, AGC attended Throop Borough's Special Monthly Work Session and Council Meeting. (See notes from the work session and from the meeting attached.)
20. On March 15, 2010, AGC notified Throop Borough and Cocciardi of stormwater discharge from the sedimentation basin that was above the turbidity performance standard. Information regarding the discharge was also posted on the web site.



21. On March 16, 2010, Throop Borough was contacted and informed that repairs had been made to the outlet structure and that the skimmer arm was being turned to allow flow out of the basin into the discharge channel as designed.
22. On March 22, 2010, a flyer was sent out to the Throop community to let residents know that the third phase construction activities would be starting.
23. On March 23, 2010, AGC was contacted by a resident on Franko Street who was concerned about truck traffic resuming and trucks not stopping at the corner of Delaware and George Streets. AGC notified SCE of the resident's concerns.
24. On March 24, 2010, AGC met with Throop Borough representatives regarding the Borough's portion of the Franko Street extension and fencing options for the Site once remediation is complete.
25. Residential soil sampling was conducted by USEPA during the week of March 29, 2010. Split samples were provided to Advanced GeoServices.
26. On March 29, 2010, AGC provided Throop Borough Council with a summary of activities at the Site. AGC also attended Throop Borough's Special Monthly Work Session and Council Meeting that evening. (See notes from the work session and from the meeting attached.)
27. On March 31, 2010, AGC notified Throop Borough and Cocciardi of stormwater discharge from the sedimentation basin that was above the turbidity performance standard. Information regarding the discharge was also posted on the web site.

SCHEDULE AND PERCENT COMPLETE

The attached CMI Schedule (Table 3) has been updated with actual dates on which the tasks were accomplished and corresponding revisions to the projected completion dates. Based on the Revised Cost Estimate through December 31, 2009, the CMI is approximately 76% complete.

PROBLEMS ENCOUNTERED

No problems were encountered during First Quarter 2010.

PERSONNEL CHANGES

The Site Superintendent was changed to Mr. Steve Brominski, SCE.

ACTIONS PLANNED FOR SECOND QUARTER 2011

PERMITTING AND DESIGN

No activities are planned for Second Quarter 2010.



CORRECTIVE MEASURES CONSTRUCTION

The following activities are planned for Second Quarter 2010:

- Dewatering and dredging of contaminated sediments within the eastern portion of the Basin. Material will be removed and stabilized with pelletized lime prior to placement in the CA.
- Final grading of the CA.
- Preparation of the surface of the CA prior to installation of the capping materials.
- Erosion repair.
- Repair of sediment basin east slope.
- Re-installation of gabion mattresses at CD-15.
- Excavation of the anchor trench and installation of the cap perimeter drain.
- Installation of the remaining layers of the cap.
- Importation and placement of cap cover soil, structural fill, and topsoil.
- Installation of the rock outfalls.
- Completion of the permanent access road.
- Turf establishment site-wide.
- Final grading, seeding, and stabilization of all disturbed areas.
- Construction of the Franko Street extension.
- Redressing of parking area.
- Removal of temporary fencing in North Woods.
- General Site housekeeping.
- Demobilization.

Completion of these activities is weather dependent.

QUALITY ASSURANCE

The following activities are planned for Second Quarter 2010:

- Continue observation of construction activities and photo-documentation.
- Conduct daily erosion and sediment control inspections at the facility and weekly inspections at the Throop Borough borrow facility, in conjunction with SCE inspections.
- Complete confirmatory sampling for lead at the basin.



MONITORING

The following activities are planned for Second Quarter 2010:

- Continue the weekly perimeter air monitoring program in accordance with the Sampling and Analysis Plan. Perimeter air lead results will be compared to 0.15 $\mu\text{g}/\text{m}^3$ lead (effective October 2009).
- Perform Second Quarter 2010 post-construction river sediment monitoring in accordance with the Sampling and Analysis Plan.
- During construction, perform daily basin discharge monitoring and monthly sampling and lead analysis in accordance with the Sampling and Analysis Plan.
- Submit results for the Second Quarter 2010 Ambient Air Monitoring Report.
- Submit results for the Second Quarter 2010 river sediment monitoring.

SITE MAINTENANCE

No activities are planned for Second Quarter 2010.

COMMUNITY RELATIONS

The following activities are planned for Second Quarter 2010:

- **April through June, 2010** - Continue to regularly update the Marjol web site with any air monitoring data, photos, the weekly construction schedules, and other information.
- **April through June, 2010** - Continue to provide summaries to Cocciardi, USEPA, and PADEP regarding the schedule of construction activities.
- **April 12, 2010** - Attend Throop Borough Council's Special Monthly Work Session and Meeting.
- **April 26, 2010** - Attend Throop Borough Council's Monthly Monthly Work Session and Meeting.
- **May 10, 2010** - Attend Throop Borough Council's Special Monthly Work Session and Meeting.
- **May 24, 2010** - Attend Throop Borough Council's Monthly Monthly Work Session and Meeting.



- **June 14, 2010** - Attend Throop Borough Council's Special Monthly Work Session and Meeting.
- **June 15, 2010** - Send out Marjol Battery Site Newsletter Number 96 providing an update on construction activities.
- **June 28, 2010** - Attend Throop Borough Council's Monthly Monthly Work Session and Meeting.
- **June 28, 2010** - Send out initial letters regarding the in-house blood lead screening part of the Annual Blood Lead Screening Program.

ANTICIPATED PROBLEMS

No problems are anticipated during Second Quarter 2010.

Barbara L. Forslund, P.E.
Advanced GeoServices Project Coordinator

cc: Lisa Ayers, Advanced GeoServices
James Cronmiller, Gould
Leonard Zelinka, PADEP
Adam Doubleday, Advanced GeoServices
Roger Moose, GF

Throop Borough Council
Louis Cimini, Throop Borough Solicitor
Len Zelinka, PADEP
Repository (c/o Lisa Ayers)
Rocco DiPietro, Cocciardi



ATTACHMENTS PROVIDED ON CD

First Quarter 2010 Ambient Air Monitoring Report
First Quarter 2010 Lackawanna River Sediment Sampling
Throop Borough Council Meeting Minutes
Construction Documents
 Construction Schedules
 Weekly QA Reports
 SCE Shutdown Inspections
 Meeting Minutes
 Monitoring Results
 Basin Discharge Monitoring
 Perimeter Air Monitoring
 Photographs
 Weather Data
 Permits

TABLE 1
Marjol Corrective Measures Implementation
Permitting Timeline

Permit Name	Earliest Design Stage When Submitted	Entity Applying for the Permit	Permitting Agency	Time for Processing and Review ¹	Permit Expiration	Pre-Construction Notification	Completion Activities	Date Submitted	Date Approved
Individual NPDES Permit (PAI023508001)	At completion of 90% Design	AGC	LCCD	30 days General; 120 days Individual	5/8/2013; Renewal due 180 days prior to expiration.	30-day public comment period published 3/8/2008. Public hearing held 4/16/2008. LCCD was notified of the pre-construction meeting on 4/18/08.	Submit Notice of Termination within 7 working days after final stabilization is achieved.	12/26/2007 General; 1/31/2008 Individual	2/14/2008 Administratively complete; permit issued 5/9/2008
General NPDES Permit (PAG2-0035-09-005) Throop Borough Borrow Area	N/A	BCM / AGC	LCCD	30 days	3/20/2014	LCCD notified on 3/25/09	Submit Notice of Termination	2/09, 3/09	3/23/2009
Wetlands Waiver	At completion of 30% Design	AGC	PADEP	130 days	No expiration.	PA Fish & Wildlife notified 4/21/2008	None required.	8/3/2007	9/4/2007
Air Permit Request for Determination - Solidification	At completion of 30% Design	AGC	PADEP	30 days	No expiration.	Notify 2 weeks prior to start of solidification	None required.	8/17/2007, Revision submitted 9/13/2007	10/22/2007
Air Permit Request for Determination - Passive Gas Vent	At completion of 90% Design	AGC	PADEP	30 days	No expiration.	None required.	None required.	11/13/2007; 2/20/2008 revisions; 4/24/2008 electronic submission of 2/20/2008 revision	12/18/2007; revision approved 4/28/2008
Regulated Fill General Permit	After approval of other permits	AGC	PADEP	Approx. 60 days	12/24/2013	None required.	Submit proof of recorded deed notice to PADEP.	11/7/2008	11/24/2008 Administratively complete; permit issued 2/25/09
Fence Permit (08-1001)	At completion of 90% Design	AGC	Throop Borough	Approx. 60 days	1 year from issue unless work has begun. Work must be complete in 2 years from issue. Renewal due 60 days prior to expiration. Renewal approved 1/7/2010 for expiration 12/31/2010.	Zoning Officer notified 4/21/2008.	Zoning Officer inspection.	12/14/2007; amended 5/21/2008; amended 8/6/2008	1/24/2008; 5/27/2008; 8/14/2008; 1/7/2010
Preliminary Land Development Plan	At completion of 90% Design	AGC	Throop Borough	Approx. 100 days	3 years from issue. 1 year extension request due 90 days prior to expiration.	None required.	None required.	12/5/07 (Borough); 12/10/07 (LCRPC)	12/10/07 (LCRPC, no review); Planning Commission approval 5/5/2008
Stormwater Management Plan	At completion of 90% Design	AGC	Throop Borough	Approx. 150 days	No expiration.	None required.	Provide notification to Borough Engineer when complete. Inspection by Borough Engineer.	12/5/07 (Borough); 12/10/07 (LCRPC)	12/10/07 (LCRPC, no review); R. Nitch letter received 4/25/2008; Planning Commission approval 5/5/2008
Building Permit (if applicable)	At completion of 90% Design	AGC	Throop Borough	To be determined	Begin work within 6 months of issue. Expires 12 months from issue. Renewal approved 1/7/2010 for expiration 12/31/2010.	None required.	None required.	n/a	6/24/2008; 1/7/2010
Trailer Occupancy (Special Exemption Use)	After contractor selection	Contractor	Throop Borough	Approx. 60 days	2 years from issue. Renewal approved 1/7/2010 for expiration 12/31/2010.	Notify Zoning Officer prior to use.	None required.	Discussed at preconstruction meeting 4/29/2008	5/1/2008; 1/7/2010
Air Permit Request for Determination - Solidification at Borrow Source	N/A	Contractor	PADEP		No expiration.	None required.	None required.	10/7/2009	10/13/2009

NOTE:

1. Review time began when application is administratively complete.
2. Because of the extensive clearing and grading activities, the Preliminary Land Development Plan was submitted to Throop Borough which required a review by the Planning Commission and Engineer.

Table 2
DESIGN ADDENDUM SUMMARY
Marjol Battery Site



Addendum No.	Description	Submission Date	USEPA/PADEP Approval Date	Applicable Permit Revision (if any)					Change Order		
				Permit	Submission Date	Description	Receiving Party	Approval Date	No.	Submission Date	Approval Date
n/a	Change super silt fence to 24 inch silt soxx	5/23/2008	n/a	NPDES	5/23/2008	Minor Modification Permit Addendum	LCCD	5/27/2008	n/a	5/23/2008	5/23/2008
n/a	Add permanent fence at low area at North Woods	5/21/2008	n/a	Fence	5/21/2008		Throop Borough	5/27/2008	n/a		
1	Immediate Action Level for real-time monitoring at non-contaminated areas	6/4/2008	6/9/2008	n/a	n/a	n/a	n/a	n/a	n/a		
n/a	Install temporary 6 ft chain link fence at south and west facility boundary	6/6/2008	n/a	n/a	n/a	n/a	n/a	n/a	1	6/17/2008	6/23/2008
2	Excavation at NW-24 and NW-25	6/24/2008	7/2/2008	NPDES	6/25/2008	Minor Modification No. 2	LCCD	7/23/2008			
3	Anti-seep collar location	6/25/2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	Alternate grout for boring abandonment	7/1/2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4	Stockpile cover, Excavation Sequence, Outlet Structure, Anti-Seep Collar, SS-8a & 8b location	7/14/2008	n/a	NPDES	7/3/2008, drawings 7/14/08	Minor Modification No. 3	LCCD	7/23/2008	n/a	n/a	n/a
5	Interim Proposed Basin Discharge procedures	7/30/2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	Extend toe of slope due to existing grade. Additional clearing, silt sock relocation, temporary fence relocation	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	8/4/2008	8/6/2008
n/a	Gate at Ash Street extension	8/6/2008	n/a	Fence	8/6/2008	Permit Addendum No.2	Throop Borough	8/14/2008	n/a	n/a	n/a
n/a	Problem Resolution Procedures	8/6/2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	Collocated PAM monitoring, increased observation readings for real-time TSP	8/15/2008	n/a	n/a	n/a	n/a	n/a	n/a	5	9/8/2008	9/9/2008
n/a	Survey at additional North Woods Area	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	8/26/2008	8/26/2008
n/a	Existing Basin Dewatering System	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6	9/11/2008	9/11/2008
n/a	Additional T&M rate sheet	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7	9/12/2008	9/25/2008
6	Change reinforced slope to 2:1 slope	9/15/2008	10/2/2008	NPDES	3/10/09, 4/3/09	Minor Modification No. 4	LCCD	seed 10/20/08	n/a	n/a	n/a
n/a	Costs for terra tubes and Pond Clear	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8	9/15/2008	9/30/2008
n/a	Re-establish Exclusion Zone	9/21/2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	Suspend real-time air monitoring during days with precipitation	9/26/2008	9/26/2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	Revisions to subcontractor documentation and invoice procedures	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	9/30/2008	10/8/2008
7	Martarano alternate seed mix	10/20/2008, 3/10/09, revised 4/3/09	12/15/2009	NPDES	3/10/09, 4/3/09	Minor Modification No. 4	LCCD	verbal 10/30/08	T&M	n/a	n/a
n/a	Change stabilization to mulch only, in lieu of seed and mulch due to winter weather	n/a	12/5/2008	NPDES	verbal	n/a	LCCD	verbal 11/25/08	11	12/9/2008	3/3/2009
7	Revise excavation sequence to reflect work performed in Phase I and remaining work to be performed in Phase II	10/2/2008, 11/11/2008, 3/10/09, revised 4/3/09	n/a	NPDES	3/10/09, 4/3/09	Minor Modification No. 4	LCCD	pending	n/a	n/a	n/a
7	Revise SAP Tab 2 and 8	3/10/09, revised 4/3/09	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
7	Change 2:1 slope seed mix as recommended by EPA	3/10/09, revised 4/3/09	n/a	NPDES	3/10/09, 4/3/09	Minor Modification No. 4	LCCD	4/28/2009	n/a	n/a	n/a
7	Revised permanent access road stone	3/10/09, revised 4/3/09	n/a	NPDES	3/10/09, 4/3/09	Minor Modification No. 4	LCCD	4/28/2009	12	2/17/2009	3/3/2009
7	Franko Street extension	3/10/09, revised 4/3/09	n/a	NPDES	3/10/09, 4/3/09	Minor Modification No. 4	LCCD	4/28/2009	pending	pending	pending
7	Grove Street removal and restoration	3/10/09, revised 4/3/09	n/a	NPDES	3/10/09, 4/3/09	Minor Modification No. 4	LCCD	4/28/2009	n/a	n/a	n/a
n/a	Regulated Fill Permit WMGR096	2/25/2009	PADEP	Regulated Fill	2/12/2009	Soil Sampling Plan	PADEP	2/25/2009	n/a	n/a	n/a
n/a	General NPDES Permit PAG-2-0035-09-005	2/26/2009	3/23/2009	NPDES	3/10/2009	Throop Borrow Fill Removal Project.	PADEP, LCCD	3/23/2009	pending	pending	pending
8	Revised berm and solidified waste grades.	6/12/2009	6/17/2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
9	Revised final grades	6/18/2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
10	Revised solidified waste and final grades	7/16/2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	Storage of ECM	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9	12/31/2008	1/13/2009
n/a	Tree removal at Areas T & M	n/a	n/a	n/a	n/a	n/a	n/a	n/a	10	12/9/2008	3/3/2009
n/a	Contract revision	n/a	n/a	n/a	n/a	n/a	n/a	n/a	13	n/a	3/3/2009
n/a	Chip/grind stumps from Borough borrow and haul road	n/a	n/a	n/a	n/a	n/a	n/a	n/a	14	4/20/2009	4/21/2009
n/a	Excavate fill from F & G, place at alternate support zone	n/a	n/a	n/a	n/a	n/a	n/a	n/a	15	4/20/2009	4/21/2009
n/a	Hydraulic hammer to reduce rocks at Borough borrow	n/a	n/a	n/a	n/a	n/a	n/a	n/a	16	5/4/2009	5/5/2009
n/a	Grading, drainage, seeding, and stone improvements for haul road	n/a	n/a	n/a	n/a	n/a	n/a	n/a	17	5/5/2009	5/12/2009
n/a	Stored materials - geosynthetics	n/a	n/a	n/a	n/a	n/a	n/a	n/a	18	6/3/2009	6/16/2009
n/a	Change permanent seed mix to steep slope mix	n/a	n/a	n/a	n/a	n/a	n/a	n/a	20	8/12/2009	8/21/2009
n/a	Change portions of access road stone from AASHTO#3 to 4A modified	n/a	n/a	n/a	n/a	n/a	n/a	n/a	21	9/10/2009	9/15/2009
n/a	Jute mat in lieu of temporary or permanent ECM	n/a	n/a	n/a	n/a	n/a	n/a	n/a	22	10/30/2009	11/11/2009
n/a	Transport solidified material from Church	n/a	n/a	n/a	n/a	n/a	n/a	n/a	19	9/1/2009	9/8/2009
n/a	Screen and import 6" topsoil and cap cover soil	n/a	n/a	n/a	n/a	n/a	n/a	n/a	23	11/23/2009	11/30/2009
n/a	Rehandle cap cover soil and topsoil	n/a	n/a	n/a	n/a	n/a	n/a	n/a	23A	11/23/2009	12/1/2009



**TABLE 3
CORRECTIVE MEASURES IMPLEMENTATION SCHEDULE
FIRST QUARTER 2010**

Estimated time for construction is 17 months of construction with minimum winter shutdown of 120 days (December through March).

	Milestone		Projected Dates from CMI		Actual Dates
			Work Plan	Revised Projected Dates	
1)	Restart Letter Received	Actual	9/19/2005	n/a	9/19/2005
2)	Notice on Dispute	Actual	9/26/2005	n/a	9/26/2005
3)	Consent Order Rec'd	Actual	12/1/2005	n/a	12/1/2005
4)	Consent Order Signed	Actual	7/13/2006	n/a	7/13/2006
5)	Proj. Coord. And Consultant Notice	In Order	7/13/2006	n/a	7/13/2006
6)	Title Notice Submitted	due 30 days after 4)	8/14/2006	n/a	8/14/2006 (Draft submitted) 5/29/2007 (approved) 6/4/2007 (recorded)
7)	Cost Estimates Submitted	due 30 days after 4)	8/14/2006	n/a	8/14/2006*
8)	CMI Work Plan Submitted	due 60 days after 4)	7/21/2006	n/a	7/21/2006*
9)	Financial Assurances Due	60 days after approval of 7)	11/10/2006 (assumed 30 days to approve 7)	12/31/2007	8/11/2008
10)	CMI WP Approved	assumed 60 days after 8). Can approve PDI early (14 days)	9/19/2006 for entire WP. 8/4/2006 for PDI	n/a	9/1/2006 (mine fire), 11/2/2006 (geoprobe), 2/13/2007 (Work Plan except soil sampling), 4/20/2007 (soil), 5/3/2007 (Work Plan except Section 7.5)
11)	PDI Start	assumed 3 weeks after PDI Work Plan approval, weather permitting	8/28/2006	n/a	9/12/2006 (mine fire), 11/27/2006 (geoprobe), 4/23/2007 (soil, lead), 8/6/2007 (soil, PCB PAH)
12)	PDI Complete	assumed 3 weeks after 11)	9/18/2006	n/a	10/16/2006 (mine fire), 11/29/2006 (geoprobe), 5/25/2007 (soil, lead), 8/6/2007 (soil, PCB PAH)
13)	Prelim. Design Submitted	due 90 days after 12)	12/18/2006	n/a	6/29/2007
14)	Prelim. Design Comments	Assumed 45 days after 13)	2/1/2007	n/a	8/10/2007
15)	Revised Cost Estimate	due on 2/15/2007	2/15/2007	n/a	2/15/2007
16)	90% Design Submitted	due 90 days after 14)	5/2/2007	n/a	11/8/2007
17)	Request for Bid Issued	assumed 2 weeks after 16)	5/16/2007	n/a	12/7/2007
18)	90% Design Approved with Comments	Assumed 30 days after 16)	6/1/2007	n/a	12/13/07 (except SAP)
19)	100% Design Complete to Bidders and EPA	due 2 weeks after 18)	6/15/2007	n/a	4/11/2008, Revised 5/12/2008, Revised 6/3/2008
20)	100% Design Approval	assumed 2 weeks after 19)	6/29/2007	4/25/2008	5/9/2008, 5/29/2008, 6/9/2008
20a)	Permit Approvals Complete			4/28/2008	2/25/2009
21)	Final Title Notice Submitted	due 30 days after 20)	7/30/2007	11/30/2009	
22)	Bids Received	due 3 weeks after 20)	7/20/2007	n/a	2/11/2008
23)	Award	assumed 2 weeks after 22)	8/3/2007	n/a	4/2/2008
24)	Notice of Contractor to EPA/DEP	Day after award	8/4/2007	n/a	4/3/2008
25)	Revised Cost Estimate	due on 8/15/2007	8/15/2007	n/a	8/15/2007
26)	Construction Start	assumed 2 weeks after award and approvals, weather permitting	8/20/2007	5/12/2008	5/12/2008
27)	Revised Cost Estimate	due 60 days after 20)	8/28/2007	5/25/2008	5/23/2008, approved 6/12/2008
28)	Revised Cost Estimate	due on 2/15/2008	2/15/2008	5/25/2008	5/23/2008, approved 6/12/2008
29)	Revised Cost Estimate	due on 8/15/2008	8/15/2008	8/15/2008	7/9/2008
30)	Revised Cost Estimate	due on 2/15/2009	2/15/2009	2/15/2009	2/15/2009
31)	Construction Complete	See note above	7/20/2009	7/1/2010	
32)	Revised Cost Estimate	due on 8/15/2009	8/15/2009	8/15/2009	8/15/2009
	Revised Cost Estimate	due on 2/15/2010	n/a	2/15/2010	2/12/2010
33)	Submit CMI Report	due 90 days after 31)	10/19/2009	9/30/2010	
34)	CMI Report Approved	assumed 30 days after 33)	11/18/2009	10/30/2010	

NOTES

- The dates in bold are committed dates for submissions. Other dates are assumed time frames for activities. The projected dates are thus minimum dates that depend on earlier dates meeting the
- * indicates that USEPA and PADEP approval of the submitted document has not yet been received.
- Projected dates are from CMI Work Plan Table 11-1 and represent the original schedule for the CMI. The revised projected dates reflect the current schedule based on approvals received to-date.
- USEPA and PADEP approved not submitting the February 15, 2008 revised cost estimate until the 100% Design was approved and construction costs were finalized.