

US EPA ARCHIVE DOCUMENT

POLREP #455 and FINAL
FAIRMONT COKE WORKS
FAIRMONT, MARION COUNTY, WV 26554
CERCLA NON-TIME CRITICAL REMOVAL ACTION
Lat 39.4958, Long -80.1181
ATTN: R3 RRC

REPORTING PERIOD: AUGUST 1996 – SEPTEMBER 2011

I. SITUATION (WEDNESDAY, 28 SEPTEMBER 2011)

- A. The purpose of this POLREP is to document completion of the non-time critical (NTC) PRP removal action conducted by ExxonMobil in accordance with EPA Removal Action Memorandums dated June 6, 2000 and July 23, 2003 pursuant to the Administrative Order on Consent (EPA Docket # 99-004-DC) dated December 18, 1998 (EE/CA Order) and as modified to incorporate the requirements of a Final Project Agreement executed by EPA, ExxonMobil and WVDEP on May 24, 1999 under EPA's Project XL Program.
- B. On December 23, 1996, the Site was listed on the NPL. On September 17, 1997, EPA and ExxonMobil entered into an AOC to conduct an RI/FS for the Site (EPA Docket # III-97-103-DC)(RI/FS Order); however, shortly thereafter ExxonMobil proposed that the Site be addressed using an alternative approach to the standard RI/FS process. ExxonMobil proposed that the investigation, risk assessment, and source control response actions be addressed under the framework of a non-time critical removal action and to follow and the principles of EPA's Project XL Program. EPA's Project XL Program provides for regulatory flexibilities as incentive to attain measurably superior environmental results. An EE/CA Order was negotiated and executed by EPA and ExxonMobil which temporarily suspended the RI/FS Order while the initial response actions at the Site were addressed as a Project XL and generally following the non-time critical removal process. Project XL is enforceable under the terms of the EE/CA Order, and upon meeting the requirements of the EE/CA Order, Project XL will be terminated and the requirements of the RI/FS Order will be reopened to address groundwater contamination and any remaining human health risk or environmental concerns not addressed under the non-time critical removal action.
- C. The previous POLREP (#454) is dated August 2, 1996. Due to the breadth and scope of work conducted at the Site during the past 15 years, this POLREP will attempt to concisely summarize and chronicle decision documents, work plan and status report submittals, general investigation and removal action implementation, wastes and quantities removed, and agencies and contractors involved during the NTC Removal conducted at the Site in order to bridge the record between the POLREPS in terms of significant events. Portions of this POLREP record will pre-date the NTC Removal Action (e.g. 1995) in order to build the framework for its implementation. While specific details of day-to-day operations of the NTC Removal will not be discussed, such information may be found in monthly progress reports which include weekly meeting minutes and in documentation found the project file.
- D. Principal Agencies and Contractors (sub-subcontractors not listed)
 - USEPA – Regulatory, Oversight

- WVDEP – Regulatory, Oversight
- ExxonMobil – Respondent
- ICF Kaiser Engineers, Inc. – ExxonMobil Prime Contractor
- Shaw Environmental & Infrastructure, Inc. - ExxonMobil Prime Contractor
- Camp Dresser and McGee (CDM) - ExxonMobil Prime Contractor
- ARCADIS - ExxonMobil Prime Contractor
- Kipin Industries, Inc. - ExxonMobil Prime Contractor and subcontractor to Prime
- TechLaw, Inc. – EPA START Oversight Contractor

E. Waste Material Removed During NTC Removal Action (Tons)*

Waste Material Description	Total Shipped	Disposal Facilities and Tonnage Shipped
Non-Hazardous low impact soil (LIS)	185,179.86	171,604.76 - Meadowfill Landfill, Bridgeport, WV 13,575.10 – American Landfill, Waynesburg, OH
Characteristic Hazardous Waste	24,095.35	5,831.15 – Michigan Treatment Plant, Belleville, MI 12,841.59 – Wayne Disposal, Belleville, MI 7,427.88 – Clean Harbors Canada 1,033.48 – Clean Harbors, Clive, UT
Non-Hazardous Unrecyclable Material	5,183.91	5,183.91 – Meadowfill Landfill, Bridgeport, WV
Non-Hazardous Water Treatment Plant Soil/Sludge/Sediment	3,222.7	3,222.7 – American Landfill, Waynesburg, OH
Potentially Recyclable Material (PRM)	6,943.46	6,943.46 – Piney Creek, LP, Clarion, PA
Asbestos Containing Material (ACM)	25.21	25.21 - Meadowfill Landfill, Bridgeport, WV
Synthetic Fuel Product (Synfuel)	486,110.87	486,110.87 – Grant Town Power Plant, Grant Town, WV
Prussian Blue Soil Material	19,355.48	19,355.48 - American Landfill, Waynesburg, OH
Construction and Demolition Material (C&D)	1,279.23	1,279.23 - Meadowfill Landfill, Bridgeport, WV
TOTAL	731,396	

*From Dec. 2010 Monthly Progress Report

II. ACTIONS TAKEN

- During 1995, a formal HRS scoring package for the Site was compiled and finalized. On June 17, 1996 the Site was proposed to the NPL.
- On August 2, 1996, the EPA Emergency Removal Action, which began in May 1993, was terminated.
- On December 23, 1996, the Site was listed on the NPL.
- On September 17, 1997, EPA and ExxonMobil entered into an Administrative Order on Consent for Remedial Investigation/Feasibility Study (RI/FS Order).
- On February 8, 1998, NPDES permit No. WV0004634 acquired from WVDEP by Sharon Steel Corporation requiring treatment of process water and Site discharge was revoked. WVDEP would later instruct ExxonMobil to remove the oxidation pond and implement interim treatment measures. Although no longer active, the NPDES discharge limits continued to be used as performance criteria for water management conducted during the NTC Removal Action.
- During 1998, an Expanded Site Investigation (ESI) was conducted at the Site by ICF Kaiser Engineers, Inc. A Field Sampling Plan (FSP) was submitted during August 1998 to EPA for review and comment and was subsequently accepted. Observations and sample data

- from the ESI were subsequently used to complete the Former Waste Management Area and Process Area EE/CAs.
- G. On June 30, 1998, the first meeting of the stakeholder panel, designated the "Fairmont Community Liaison Panel" (FCLP) was held in Fairmont, WV.
 - H. On November 12, 1998, the EPA Region 3 HSCD Division Director determined that an imminent and substantial endangerment to public health or welfare or the environment existed due to the actual or potential for release of hazardous substances (as defined in Section 101 of CERCLA, 42 U.S.C. § 9601 et al.) from the Site and signed the EE/CA Approval Memorandum.
 - I. On December 11, 1998, the RI/FS Order was suspended when the Administrative Order on Consent for Engineering Evaluation/Cost Analysis (EE/CA Order) between EPA and ExxonMobil, was executed. The strategy for Site cleanup included preparation of two EE/CAs to evaluate cleanup alternatives for the former Waste Management Area (WMA) and former Process Area, respectively, followed by an RI/FS and Record of Decision.
 - J. On March 10, 1999, WVDEP responded to a release of acidic water from the oxidation impoundment. Work conducted under State Authority included neutralization of water, stabilizing the embankment, sludge removal and containment of waste material into roll off boxes staged on site, and closeout of the oxidation impoundment. Work was performed by Shaw and later ICF Kaiser, and completed during 2000.
 - K. On May 24, 1999, the Final Project Agreement (FPA) for Project XL was issued and the EE/CA Order was modified to incorporate relevant provisions of the FPA.
 - L. On November 30, 1999, Exxon became ExxonMobil Corporation.
 - M. On February 1, 2000, the Waste Management Area EE/CA (Phase I EE/CA) was completed by ExxonMobil and ICF Kaiser (ExxonMobil contractor) in general accordance with the NCP, 40 C.F.R. § 300.415 and applicable guidance. After review by EPA, other federal, state and local agencies, EPA approved the proposed EE/CA on March 31, 2000. The proposed EE/CA was released for public comment beginning on April 4, 2000 and extending through May 5, 2000. The alternative of on-site landfilling of excavated and segregated low-BTU waste material and off-site recycling of high BTU waste material was identified as the preferred alternative based on implementability, effectiveness, and cost. A verification sampling program was proposed to confirm cleanup performance standards were met using site-specific soil-to-groundwater standards. In addition, the preferred alternative included surface water management. The WMA consists of the North and South Landfills (NLF, SLF), a former oxidation pond, an existing oxidation pond, a sludge impoundment, and the breeze washout area. Concurrently, development of a work plan for the Phase II EE/CA for the Former Processing Areas was underway during this time period.
 - N. On June 6, 2000, an Action Memorandum for implementing a non-time critical removal action at the Site was approved by the Director, EPA Hazardous Site Cleanup Division. The Action Memorandum selected the preferred alternative identified in the Phase I EE/CA to address cleanup of the WMA. The selected removal action was to be conducted and funded by ExxonMobil pursuant to the EE/CA Order.

- O. On April 22, 2002, ExxonMobil submitted the Phase II EE/CA for the Former Process Area proposing limited hot spot removal with recycling/off-site disposal for the Former Light Oil Storage Area, the Former Production Area, and Former Coke Ovens.
- P. On May 2, 2002, EPA approved the proposed Phase II EE/CA for the Former Process Area and announced a public comment period for the EE/CA covering the duration from May 3, 2002 to June 2, 2002.
- Q. On October 22, 2002, ExxonMobil issued the Site-Specific Health & Safety Plan for the WMA Landfill Closure (HASP). The document was prepared by Shaw.
- R. In November 2002, ExxonMobil and Kipin Industries entered into contract for the Waste Management Area (WMA) to use the Kipin process to recycle waste material on site into fuel (a.k.a. Synfuel) for electric power generation. Kipin mobilized to the Site during November 2002 and conducted a pilot-scale test in the WMA. EPA received the results of the successful pilot test in January 2003.
- S. During February, 2003, the Response Action Plan (RAP) for the WMA (prepared by Shaw and Kipin for ExxonMobil) was drafted and reviewed by EPA and WVDEP. Removal action in the WMA began with landfill wastes being excavated, segregated and processed using Kipin technology to meet fuel specifications required by the Grant Town Power Plant (GTTP). The process was implemented on site using excavation equipment and crushers and screeners to achieve particle size requirements and included blending of BTU amendments such as coal, carbon black, and sawdust with waste materials to meet BTU, sulfur, moisture, ash, and RCRA non-hazardous waste standards as determined by samples collected for short prox and TCLP analyses. Waste material and "Synfuel" management was conducted in containment, open excavation areas were minimized, and water capture and treatment was implemented. Engineering controls and monitoring for air emissions and odors were established in accordance with the HASP. A total of 11 amendments to the RAP would eventually be approved during the course of the site-wide NTC Removal activities.
- T. On July 21, 2003, an Action Memorandum Approving a Ceiling Increase and Modification of Scope for the Fairmont Coke Works Site was approved by the Director, EPA Hazardous Site Cleanup Division. The Action Memorandum approved and selected proposed NTC Removal action identified in the Phase II EE/CA for the Former Process Area. The selected included evaluation of surface soils, designation of hot spots, excavation of waste material to native soils, and processing of the waste materials into Synfuel where applicable, or transportation of wastes off-site to a permitted disposal facility was to be conducted and funded by ExxonMobil pursuant to the EE/CA Order. A verification sampling program was required to confirm the adequacy of the removal action in meeting performance standards established in the EE/CA. The Action Memorandum was approved for an additional \$149,191, making the new project ceiling \$15,228,895.
- U. On September 4, 2003, a visual inspection and GPS mapping of the Former Process Area was conducted by WVDEP.
- V. On May 18, 2004, ExxonMobil submitted a work plan for evaluation of surface soils in the Process Area which was approved by EPA on May 21, 2004. During May 25-26, 2004, a

preliminary investigation of the By-Products Area within the Former Process Area was conducted by ExxonMobil. The investigation was conducted in 12 previously identified potentially impacted areas and involved surface clearing, trenching, sampling and visual observation.

- W. On October 20, 2004, A Quitclaim Deed between Green Bluff Development, Inc. and the Fairmont Coke Works Site Custodial Trust (Trust) was enacted releasing the Site to the Trust.
- X. On September 27, 2006, EPA RPM Newman tasked START (TechLaw, Inc.) with conducting removal action oversight including performing characterization sampling and verification split sampling.
- Y. During 2003 through 2006, excavation and processing of wastes using the Kipin process continued at the Site on a daily basis producing 215,290 tons of finished product shipped to GTPP by the end of 2006. A water treatment plant, operated by Comtech, was constructed in the northwest area of the property to treat surface water coming off the Site while diversion ditches and berms were constructed to prevent site run-on. Treated water was monitored and discharged to the unnamed tributary. In the Coal Storage and Coke Handling Area, several feet of clean fill was used to change surface water drainage from southeast to northwest where it would drain into the unnamed tributary. Excavation of waste material occurred primarily in the NLF, SLF and By-products Area hot spot locations. Synfuel passing TCLP and Short-Prox testing was stockpiled in 4,000 ton piles on a containment pad located between the landfills where it was loaded out and shipped to Grant Town Power Plant. Approximately 11,000 cubic yards of soil was excavated from the oxidation impoundment and staged on site awaiting disposal. Off-site removal began for non-hazardous asbestos-containing waste material (ACWM) staged in 35 roll-off boxes to Imperial Landfill. In addition, two roll-offs failed TCLP (Pb) and were shipped as characteristically hazardous to Corunna, Ontario, Canada. Soil excavated from the process area pyridine sump area was staged in 89 roll-off boxes on site. Monthly water treatment plant effluent samples, waste characterization samples, By-products Area confirmation samples, and Synfuel samples were collected during this period. Air monitoring for particulates and VOCs was conducted at the Site perimeter and in the work zones on a daily basis during working hours. Coordination between EPA, WVDEP, City of Fairmont (CoF), stakeholders and potential developers was conducted on a regularly scheduled basis.
- Z. On March 27, 2007, at the request of the RPM, START collected characterization soil samples from the Light Oil Storage Area (LOS), NLF, SLF and By-Products Areas.
- AA. On April 20-24, START collected split soil confirmation samples from the NLF and SLF initiating the split sampling program. START would continue to oversee collection of verification samples throughout the duration of the project and collect split samples at a 10-20% frequency per RPM direction.
- BB. On May 16, 2007, ExxonMobil contractor CDM submitted the Status Report and Additional Excavation Plan, By-Products Area Remediation report. Following comments by the Agency oversight team (EPA, WVDEP, START), ExxonMobil submitted a revised

Draft Status Report and Additional Excavation Plan, By-Products Area Remediation report on June 8, 2007.

- CC. On June 18, 2007, EPA accepted the soil performance standard for Pyridine of 100 mg/kg in soil, proposed by ExxonMobil.
- DD. On October 15, 2007, EPA and WVDEP issued comments on the Coal and Coke Storage Closeout Report prepared by ExxonMobil and CDM in August 2007 noting a general lack of representative characterization data to formerly declare the area suitable for reuse. Additional historical data review and evaluation against current characterization objectives with follow-on field work to address data gaps was recommended.
- EE. On October 24, 2007, at the request of the RPM, START collected samples of sediment from the unnamed tributary for characterization purposes. WVDEP (T. Bass) was present to observe the sampling event.
- FF. During December 2007, ExxonMobil's prime contractor was changed from CDM to ARCADIS.
- GG. On December 31, 2007 - USEPA accepted the site-wide soil performance standard proposed by ExxonMobil for benzo(a)pyrene of 2.3 mg/Kg, and a performance standard for six other PAHs with toxicity equivalence to B(a)P collectively at 2.3 mg/Kg.
- HH. During 2007, excavation and processing of wastes using the Kipin process continued at the Site. By year end, 354,551 tons of finished product had been shipped to GTPP, cumulative project-to-date. The ACWM and pyridine wastes contained in roll-off boxes, and the oxidation impoundment soils were transported off-site and disposed at permitted disposal facilities. ExxonMobil prime contractor CDM constructed a cyanide destruction addition to the WTP to treat elevated cyanide in captured Site waters. A new containment area was constructed in order to free up space and increase Synfuel production rates. Excavation of waste materials continued in the NLF, SLF and By-Products Area. ExxonMobil excavated waste materials, collected verification samples, backfilled, graded and hydroseeded the SLF swale in an effort to meet anticipated developers construction plans and schedules. In the By-products Area, discrete hot spot excavations began running together and the excavation/grading approach transitioned from discrete to blanket coverage. Excavation began in Area 2/12 while By-Products Areas 4-11 and the Pyridine sump in Area 3 were confirmed clean, backfilled, graded, and hydroseeded. Many of the concrete foundations and vestiges of the former By-Products area were crushed and used as backfill. The eastern portion of the north landfill was excavated, sampled, and graded and a limestone bed was placed in a wet area containing acidic water seepage. Air monitoring for particulates and VOCs was conducted at the Site perimeter and in the work zones on a daily basis. Stakeholders continued to meet on a scheduled monthly basis and Community Liaison Panel meetings, which were open to the public, were held semi-annually.
- II. During March 2008, ExxonMobil and ARCADIS completed final revisions to the HASP and submitted it for Agency review. The final HASP, dated May 2008 went into effect following acceptance of the document by EPA and WVDEP.

- JJ. On May 15, 2008, ARCADIS submitted the revised Closure Report (dated May 14, 2008) for the Coal Storage and Coke Handling Area (CSA/CHA) to EPA and WVDEP. The report identified the presence of arsenic and lead above USEPA risk-based criteria at several historical data points. Field work to confirm the presence of these hot spots would follow.
- KK. On August 27, 2008, ExxonMobil contractor, ARCADIS, submitted the Project QAPP following review and acceptance of the document by EPA and WVDEP.
- LL. On August 28, 2008, EPA conditionally approved the revised FSP which moved towards a site-wide sampling approach. The FSP was later updated during January 2009 and November 19, 2009.
- MM. On October 6, 2008, ExxonMobil submitted the Light Oil Storage Area Remedial Action Plan (LOS RAP) for review and comment by EPA and WVDEP. On October 22, 2008, EPA approved the LOS RAP.
- NN. During 2008, excavation and processing of wastes using the Kipin process continued at the Site. Coal, carbon black, and coal silt amendments continued to be blended with excavated wastes to produce Synfuel. By year end, 452,946 tons of finished product had been shipped to GTPP, cumulative project-to-date. Excavation of waste materials was conducted in the SLF, NLF, Center West, and Area 2/12. The WTP continued to operate as needed and received maintenance and minor upgrades by Comtech. Waste sludge generated at the WTP was dewatered and shipped to American Landfill. ARCADIS conducted a Site survey of elevations and grade. Across the Site, storm water and run-on/run-off controls were managed and upgraded as needed. An evaluation of north and south catch basin's water quality was conducted to determine the feasibility for discharging the basins to the City of Fairmont POTW. Eventually, the upper containment pond was dewatered into the WTP and removed. The SLF basin was extended and lined in preparation for NLF closure. Removal actions in the NLF were completed following dewatering, excavation of waste material, post-excavation verification sampling, backfilling, grading, hydro-seeding, and erosion and sedimentation controls. Backfill for the NLF was obtained from the clean cover fill that was previously placed across the CHA/CSA to direct drainage. In the CSA/CHA, investigation samples were collected from several test pits to support closure of the potential source area. In the LOS Area Soil and groundwater investigation began. Direct push samples were collected from the LOS and seven temporary wells were installed to define excavation limits. LOS sub-surface soil samples were also collected within the LOS for in-situ characterization. Elsewhere on the Site, direct push was used to collect soil samples of sub-grade material in the containment area, near Area 2/12, and near WTP Mod-1 to evaluate the extent of waste material buried in the subsurface. Verification samples were collected from the NLF, SLF, and By-Products areas of the Site. Non-hazardous low-impact soil (LIS) and Prussian Blue waste materials were characterized and transported to Meadowfill and American Landfills, respectively. In the SLF, ACWM was encountered, excavated and disposed of offsite. In addition, construction and demolition material was removed and disposed of offsite. Meetings with stakeholders and developers continued on a regular basis.

- OO. During January, 2009, ExxonMobil began source removal activities in the LOS area. Removal operations included excavation and direct loading of LOS low-impact soils to an off-site permitted disposal facility and segregation and stockpiling of PRM and characteristically hazardous waste material on site pending transportation and disposal. Water was conveyed to the WTP for treatment. LOS removal activities were completed during May 2009.
- PP. On July 21, 2009, EPA withdrew its approval of waste characterization protocols utilized for marginally contaminated soil excavated at the Site. EPA requested that ExxonMobil submit a revised sampling operations plan for piles staged for characterization.
- QQ. On July 29, 2009, WVDEP issued a Notice of Violation (NOV) to ARCADIS regarding characterization of generated material for off-site disposal. Excavation, waste characterization sampling, and off-site shipment of non-hazardous materials were stopped pending resolution of the NOV.
- RR. On July 29, 2009, Kipin Industries, Inc. completed demobilization from the Site. On-site recycling of waste materials into Synfuel using the Kipin process was completed. Remaining PRM would be shipped off-site to Piney Creek, LP for recycling.
- SS. On October 20, 2009, ExxonMobil and ARCADIS submitted the LOS Area Post-Excavation Work Plan to EPA and WVDEP. The document described proposed actions to evaluate the vertical extent of contaminants in the bottom of the excavation. The work plan was approved by the agencies on November 5, 2009. In addition, on that date, EPA and WVDEP approved a Pipe Removal Decision Matrix submitted by ExxonMobil.
- TT. On November 11, 2009, ARCADIS submitted the LOS Area Post-Excavation Assessment work plan to EPA and WVDEP for review. On December 10, 2009, the agencies approved the work plan and recommended a few additional sampling points be added to address data gaps.
- UU. On November 24, 2009, ARCADIS issued via email the Area 2/12 Backfill and Restoration Proposal.
- VV. On November 25, 2009, EPA and WVDEP approved the revised FSP.
- WW. On December 3, 2009, the Agencies approved Amendment 11 to the RAP, the final amendment. Amendment 11 conveyed operational changes necessary to transition the project towards completion of removal activities.
- XX. On December 29, 2009, ExxonMobil and ARCADIS submitted the Coal Storage Area/Coke Handling Area – Hot Spot Assessment work plan to EPA and WVDEP.
- YY. During the first half of 2009, excavation and processing of wastes using the Kipin process continued at the Site until Kipin's demobilization on July 29, 2009. The footprint of the Site continued to shrink substantially. Segregation, stockpiling, characterization, transportation and disposal of LIS, Prussian Blue soil material, WTP sludge, and ACWM continued to be conducted. By year end, cumulative project to date, 486,111 tons of finished product had been shipped to GTPP and 3,181 tons of PRM had been transported to Piney Creek, LP for off-site energy recovery. In addition, 13,375 tons of characteristically hazardous waste, 86,436 tons of LIS, 19,355 tons of Prussian Blue, and 1,279 tons of C&D material had been transported off-site to permitted disposal facilities

to date. Excavation of waste materials continued in the SLF, Center West of the NLF, Synfuel processing area, and LOS areas. Air monitoring for VOCs and particulates continued on a daily basis. Verification samples were collected from excavated areas in accordance with the verification sampling program and under START and WVDEP oversight. Removal activities in the LOS area involved excavation of 10-15 feet of soil material from the footprint of the LOS. This generated approximately 50,800 tons of LOS contaminated soil. Three LOS grids were managed as characteristically hazardous waste. An underground storage tank was encountered and removed from the LOS and its liquid benzene-contaminated contents blended into the Synfuel process for energy recovery. Post-excavation soil samples were collected in the base of the LOS excavation. In the center west area of the NLF, and in the By-Products Area, removal of ACWM was conducted where encountered during soil excavation work. In Area 2/12, piping was removed and excavation and verification sampling was conducted. Location data was collected on remaining concrete foundations and any small discrete areas of contamination. Following acceptance of RAP Amendment 11, and the revised FSP, stockpiles were reconfigured for space utilization and sampled for characterization. Direct push sampling began in the former Synfuel processing area to evaluate types and volumes of waste quantities remaining in that area. A haul road was constructed between the staging area and the WTP area in anticipation of removal activities near the WTP. Water management and erosion and sedimentation controls were conducted and managed throughout the year. Coordination between the agencies and PRP, local authorities, and stakeholders continued routinely.

- ZZ. On February 5, 2010, ARCADIS submitted the Site Wide Ground Water Monitoring Plan to EPA and WVDEP for review.
- AAA. During February 2010, sampling activities were conducted in the CSA/CHA to evaluate potential hotspot locations as outlined in the CSA/CHA Hot Spot Assessment Work Plan.
- BBB. On March 16, 2010, EPA commented on the Site Wide Ground Water Monitoring Plan.
- CCC. On March 30, 2010, ARCADIS submitted the Coal Storage/Coke Handling – Hot Spot Assessment Report to the Agencies for review.
- DDD. On April 20, 2010, EPA and WVDEP approved ExxonMobil's CSA/CHA Hot Spot Assessment Report and their proposal to remove an arsenic hotspot via excavation and disposal. Excavation of the hot spot occurred during April 22-23, 2010 and a final report was submitted on July 9, 2010.
- EEE. On May 6, 2010, ARCADIS submitted the Plan for Removal of Tar-Like Materials Adjacent to the LOS Area. EPA approved the work plan on May 10, 2010.
- FFF. On May 7, 2010, ExxonMobil and ARCADIS submitted the MOD1 Area Overburden Results/Proposal which proposed using overburden materials from the MOD1 Area to be used as on-site backfill.
- GGG. On June 14, 2010, ExxonMobil and ARCADIS submitted the LOS Assessment Report to EPA and WVDEP.
- HHH. On August 4, 2010, ExxonMobil and ARCADIS submitted an Assessment of Potential Waste Locations Work Plan for addressing two discrete locations of historical waste

disposal located at the western portion of the Site. The work plan was approved by EPA and WVDEP on August 9, 2010.

- III. On August 13, 2010, ExxonMobil and ARCADIS submitted the Haul Road Characterization Work Plan. The work plan was approved by EPA and WVDEP on September 1, 2010.
- JJJ. On September 17, 2010, ExxonMobil and ARCADIS submitted the Haul Road Loop Characterization Work Plan. The work plan was approved by EPA and WVDEP on September 21, 2010.
- KKK. On September 22, 2010, ExxonMobil and ARCADIS submitted Results of the Assessment of Potential Waste Locations to EPA and WVDEP. The report provided data from characterization samples collected from locations at the northwest corner of the Site.
- LLL. On October 13, 2010, ARCADIS submitted the Work Plan for Removal of Off-Site Material (from Areas 1-3 located north of the WTP) to the agencies for review.
- MMM. During 2010, removal actions continued in the SLF, LOS, Area 2/12, Mod 1 area, CSA/CHA, south basin, stockpile staging areas, Areas 1-3 located north of the WTP area, and former Synfuel processing area located between the NLF and SLF. In the LOS Area, soil borings and test pits were installed to assess areas outside of excavation limits according to the LOS Post Excavation Assessment work plan. During May 2010, trees were cleared along the western border. Tar-like materials were excavated from the area and the area was confirmed clean, graded, and hydroseeded. An orange watch layer was installed within the LOS excavation area and a 2' layer of topsoil from the Trust Property was placed. In the SLF Area, impacted soils were excavated from the swale area along a general trend from southeast to northwest (towards the Mod 1 Area of the WTP). In addition, test pits were dug to assess the presence of any deeper impacted soils and if encountered, removed. Verification samples were collected under oversight as grids were cleared and the areas were graded to control run-off. The south basin was shortened and eventually removed as the footprint of the Site diminished and surface water was diverted to clean water receptors as grids were verified to have met performance standards. In the Mod 1 Area near the WTP, excavation and segregation of waste materials was conducted. Verified clean grids were backfilled with clean overburden from on-site soils and from an off-site source. In the CSA/CHA, test pits were dug to evaluate hot spots and excavated soil was shipped off-site for disposal. In Area 2/12, the area was scraped of visibly impacted soils and along its bottom. The depression was backfilled with clean soil from an off-site borrow source, graded and hydroseeded. Soil borings and monitoring wells were installed in accordance with the Site Wide Groundwater Monitoring Plan. Sampling of site-wide monitoring wells was conducted during March/April and September 2010. Removal and segregation of waste materials from Areas 1-3 located north of the WTP was completed. Throughout the year, excavated waste materials were segregated, stockpiled and sampled for disposal/recycling characterization parameters. In an area southwest of the WTP, a phyto-remediation plot was installed in a seep area. Coordination with the WV Army Reserve National Guard (WVARNG) was conducted pertaining to interrelated stormwater management issues. The WVARNG was conducting extensive earth moving on the hilltop directly south of the

Site in preparation for constructing a new facility part of which required fill to be placed on the southern border of the site. By year end, excavation activities, verification sampling, grading, hydroseeding, and transportation and disposal of excavated waste materials were completed. Confirmation sampling demonstrated that the excavated areas of the Site met cleanup goals. The Site was demobilized. WTP operations were completed. Site control was released to the Trust.

- NNN. During January, 2011, ARCADIS demobilized Site trailers and other equipment from the site. A site-wide groundwater sampling event was conducted during the week of January 24, 2011. Oversight and split sampling was conducted by START.
- OOO. On January 31, 2011, ROUX Associates provided a summary of the Installation of Anoxic Limestone Drain and Reactive Compost Barrier Remedial System and Phytoplot.
- PPP. On January 31, 2011, ExxonMobil and ARCADIS submitted Closeout Reports for the Former LOS Area and the Former By-Products Area to EPA and WVDEP for review.
- QQQ. On February 7, 2011, ExxonMobil and ARCADIS submitted the Closeout Report for the Former Waste Management Area to EPA and WVDEP for review.
- RRR. On March 9, 2011, ExxonMobil and ARCADIS submitted the Remedial Investigation/Feasibility Study Work Plan to EPA and WVDEP for review.
- SSS. On April 11, 2011, ExxonMobil and ARCADIS submitted the groundwater summary report for the January 2011 baseline sampling event to EPA and WVDEP.
- TTT. During April 2011, ExxonMobil and ARCADIS initiated decommissioning and demolition of the WTP. Stone, soil and grass seed was installed near the WTP seeps to promote vegetative growth, and erosion repair was conducted on the former landfills.
- UUU. During May 2011, decommissioning of the WTP was completed. The WTP tents were left in place on Site. Grading was conducted at Seep #1 and #2 and seeding of the former landfill areas was conducted. EPA and WVDEP continued to coordinate with ARCADIS regarding LOS Closeout report comments. A stakeholder's meeting was held on May 18, 2011 and the FCLP meeting was held on the same day.
- VVV. During June 2011, the WTP tents were dismantled by ARCADIS and removed from the Site by the City of Fairmont. Erosion control maintenance was conducted throughout the Site. On June 21, 2011, EPA, WVDEP, ExxonMobil, TechLaw, and ARCADIS discussed expectations of the RI/FS work plan format and human health and ecological risk assessment work plan contents. The closeout reports and RI/FS work plan will be revised to reflect comments and content expectations.
- WWW. During July 2011, Site erosion control and maintenance was conducted.
- XXX. On July 27, 2011, ExxonMobil and ARCADIS submitted the revised Process Area Closeout Report to EPA and WVDEP for review.
- YYY. On August 5, 2011, ExxonMobil and ARCADIS submitted the revised Closeout Report for the Former Waste Management Area to EPA and WVDEP for review.
- ZZZ. On August 9, 2011, ExxonMobil and ARCADIS submitted the revised LOS Closeout Report to EPA and WVDEP for review.
- AAAA. On September 28, 2011, EPA approved the Revised Closeout Reports for the Process Area, Waste Management Area, and Light Oil Storage Area, collectively referred to as the

“Final Report” documenting physical response actions required by the RAP have been completed.

III FUTURE PLANS

- A. Pursuant to Section XXXI of the Removal Order, EPA will issue a letter to ExxonMobil lifting the temporary suspension of requirements under the RI/FS Order. As previously agreed, ExxonMobil will conduct an RI/FS that will assess contaminated groundwater and any other remaining residual hazardous substances presenting potential human health risk or ecological toxicity concerns. These areas will be addressed under Record of Decision (ROD) for the Fairmont Coke Works Site.

IV OUTCOME MEASURES

A. Data Elements

- a. Site Name – Sharon Steel Corporation – Fairmont Coke Works
- b. Site Address – Lafayette Street, Fairmont, Marion County, WV 26554
- c. US EPA Site ID – WVD000800441
- d. Principle Contaminants – Benzo(a)pyrene, naphthalene, and benzene
- e. Pathway(s) – Soil and Ground Water
- f. Potentially Contaminated Area by Pathway – Approximately 64 Acres
 - i. Contaminated Medium – Soil (and surface water run-on)
 - ii. Estimated Volume of Contaminate Removed – see Table in Section I,E
 - iii. Name of Water Body – Treated wastewater discharged to unnamed tributary of Monongahela River.
- g. Residential Population On-site - 0
- h. Residential Neighborhood Population (off-site 1-Mile Radius, 2000 Census) – 3,087
- i. Restricted Access Multiplier – 0.5
- j. Sum Counts of Human Exposure Avoided – 1,543
- k. Extramural Funding Associated with Action - \$0.00 (PRP-funded)

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