American Integrated Services, Inc.

ERM-West, Inc., Torrance California

Decontamination of Styrene Manufacturing Plant

Client	Contact	Performance Period	Contract Value
ERM-West, Inc.	Alex Cates 925-946-0455	October, 2014 – March, 2015	$5,342,095

Key Features

- Full negative air encapsulation of a four story polystyrene processing train
- Sandblasting of PCB impacted paint off of all metal surfaces to near white specifications
- Complete wash down of processing train
- Restoration of all insulation and paint to original specifications
- Installation of custom sump and hook-up to existing storm drain system
- Completed work in allotted time of five months using two crews, twenty four hours a day, six days a week.Worked a total of 23,000 man hours from start to finish.

AIS was contracted to perform asbestos abatement, PCB remediation and decontamination, resurfacing of metal structures including painting, fireproofing and re -insulating of Americas Styrenics' four story process building (Train #4) which produced polystyrene. The train is composed of process lines, pumps, vessels and reactors and is mounted on a 40-foot by 60-foot superstructure consisting of metal columns, I-beams and floor grates. It is open to the elements with no walls or roof structures.

The EPA performed preliminary sampling and categorized Train 4 as exceeding the acceptable threshold for PCB contamination. Due to the high demand for polystyrene, AIS agreed to have the train turned over to the client in 5 months with two crews running 24 hours - six days a week.

Working closely with our Health and Safety Department, AIS implemented a Behavior Based Safety program. This program included the review of similar projects, record keeping and documentation of hours worked, trends, near misses and all instances of personnel using their Stop Work Authority. AIS empowered all employees, subcontractors, site visitors and plant personnel to ask questions, provide feedback, perform safety audits and to conduct safety tailgate meetings. This job was completed safely because of the partnering culture that AIS shares with all its staff, clients and subcontractors. This approach allows for all employees to participate not only at the beginning of every shift, but anytime a scope or task changes. It also allows us to identify trends, or potential trends, within groups or specific tasks. In turn, this allows our team to modify means and methods or protections as needed.

Our Health and Safety Department, Site Safety Officer and our Client would meet weekly to refine our approaches, work habits and safety protocols as needed based on feedback, scope and work crews. Records were kept and employees were encouraged to always ask questions and participate in Stop Work Authority; which we feel keeps our staff engaged and promotes continuity within the project, our clients and our Health and Safety Department. AIS also engaged the client and owner for weekly progress meetings to discuss activities. These meetings allow AIS to ensure all expectations are met, protocols are followed and provide audit feedbacks from the project.

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AIS executed this project with the following scope:

- Complete encapsulation of the processing train utilizing scaffolding systems, HAKI truss roofing and shrink-wrap methods of the exterior scaffolding.

- AIS established 24 hour negative air pressure within the containment. This was accomplished in two parts: first, utilizing a shrink wrap around the perimeter scaffold system and finally, by building of an additional interior containment to work within. This allowed a tunnel between the scaffolding and the work area to allow for full time air and visual monitoring of the interior containment. Negative air was established utilizing multiple negative air machines on each of the 4 floors throughout the train with HEPA Filters. Air exchanges were at a rate of every 7 minutes within the work area or 8 changes per hour.

- Asbestos abatement of friable insulation of two styrene vessels utilized as blow down tanks. In addition. Multiple elbows and piping containing TSI were abated throughout the train.

- Sandblasting of all previously painted piping and structural steel to a near white finish by utilizing a copper slag to minimize waste.

- All waste was collected using an industrial HEPA vacuum directed loading into bins at a dump rate of once every 10 seconds.

- AIS washed down the entire structure including all grating to eliminate any blasting residuals. AIS captured and collected all waste waters and placed within a storage tank for sampling and applicable disposal. During this process, AIS utilized multiple dehumidifiers throughout the entire work area to eliminate moisture from within the train and prevent rusting of any blasted steel prior to placement of prime coats. AIS employed a 3rd party inspector to ensure near white compliance on all blasted steel portions.

- AIS provided a three coat epoxy coating system to all areas within the train. These coating included placement of Fireproofing in designated areas throughout train as required based on the structural make up. This fireproofing application was witnessed and measured for thickness by a 3rd party inspector to ensure compliance with all recommended applications.

- AIS provided approximately 5,000 LF of insulation and jacketing for various size pipes throughout the train.

- AIS removed and replaced the existing sump system and epoxy coated the entire concrete floor.

- All samples came back satisfactory to the EPA and the Train resumed operation.

- Waste streams profiled, transported and disposed of included PCB impacted insulation, sand blast media, concrete and rinseate.