NDCEE Support of the Industrial Operations Command Technology Transition

Statement of Need

The National Defense Center for Environmental Excellence (NDCEE) is working with the U.S. Army Industrial Operations Command (IOC) to identify pollution prevention (P2) needs at selected facilities, to match those needs with potential technical solutions, and to conduct demonstration and validation of such technologies.

This task, focused initially on the Anniston Army Depot (ANAD), Milan Army Ammunition Plant (MAAP), Rock Island Arsenal (RIA), and Red River Army Depot (RRAD), supports IOC initiatives to cost effectively pursue P2 and waste reduction in response to the Pollution Prevention Act of 1990 and Executive Order 12856. It is being performed in conjunction with the IOC Pollution Prevention Centers for Technical Exchange (P2-CTX).

Identified Alternatives

The task identified, through site visits, consultations, and research, numerous P2 and related environmental management options to improve environmental performance at the selected IOC installations. Technologies being investigated, implemented, or enhanced include the following:

- Plural component paints
- Powder coating enhancements
- Waterborne primers
- Digital x-ray inspection technology
- Chemical bath recovery techniques
- Chemical stripping and cleaning alternatives.

Demonstration

The task will demonstrate the use of plural-component painting for the RIA and RRAD. Blast-based alternatives to chemical stripping and cleaning of tank and vehicle components were demonstrated for ANAD. A survey of digital x-ray systems for non-destructive inspection was performed for the MAAP. Photoprocessing chemical recovery options were also explored. The task provides technical assistance to RRAD on use of water-reducible primers, and training to the RIA on enhancing use of powder coating technology.

Justification

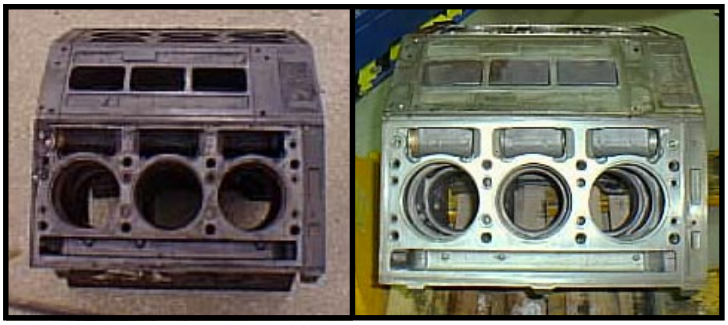
The technologies that are being investigated reduce negative environmental impacts and offer significant cost savings in terms of environmental management costs and, usually, labor and productivity. In-depth analyses of options include cost-benefit estimations such at the use of the NDCEE Environmental Cost Accounting Methodology (ECAM[SM]).

Implementation

P2 needs surveys and analyses were conducted for ANAD, MAAP, RIA, and RRAD resulting in a list of preliminary options. Each facility and the IOC chose high-priority options for further work. Based on these choices, reports on digital x-ray imaging systems and photoprocessing chemical recovery systems were produced for the MAAP. Alternative stripping and cleaning technologies were demonstrated for ANAD. The NDCEE intends to provide implementation assistance to RRAD for waterborne primers. The RIA and RRAD plan to participate in a demonstration of plural-component painting systems. Powder coat training for the RIA is included in the implementation plan.

Follow-Up

IOC facilities that are implementing technologies that were identified and investigated under this task can potentially achieve significant reductions in waste and improvement in productivity. The NDCEE's facility survey, research, demonstration, and technology transition capabilities provide a uniquely diverse approach to solving client manufacturing environmental problems cost effectively.



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Task Leader
Rodney Sobin
(814) 269-6895
sobin@ctc.com

IEC POC
Tony Wei
IEC, Building 172
Picatinny Arsenal
New Jersey 07806-5000

Status
Open

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