

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION III
STATEMENT OF BASIS

Expert Management Inc. (EMI)
River Road
Tamaqua, PA 18252

Formerly:

ICI Explosives USA, Inc. (EUSA)
EPA ID NO. PAD 071203046

And

ICI Americas, Inc. (ICIA)
EPA ID NO. PAD 000797928

I. Introduction

The United States Environmental Protection Agency (“EPA”) is issuing this Statement of Basis (“SB”) to solicit public comment on EPA’s determination that the properties formerly known as ICI Americas, Inc. Facility (ICIA) and the ICI Explosives USA, Inc. Facility (EUSA), which were located on River Road in Tamaqua within Walker Township, West Penn Township and East Brunswick Township in Schuylkill County, Pennsylvania, have attained Corrective Action Complete with Controls. The Facilities are subject to the requirement of performing corrective action activities because they are subject to the provisions of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 (“RCRA”), and the Hazardous and Solid Waste Amendments of 1984 (“HSWA”), 42 U.S.C. §§ 6901 - 6992. Section 3013 of RCRA, 42 U.S.C. § 6934, requires facilities such as ICIA and EUSA to investigate and clean up releases of hazardous wastes or hazardous constituents that have occurred at their facility. This Statement of Basis explains EPA’s preliminary determination that ICIA and EUSA have fully investigated and properly cleaned up the Facilities, with continuing groundwater monitoring at the ICIA facility under PADEP oversight.

A. EPA’s Decision

In order to expedite investigation, clean-up and potential resale of the property, EUSA was divided into several parcels: Corona, Wakefield, Project Riverdale and an unnamed clean parcel that had not been impacted by industrial activity. In addition, the ICIA facility is commonly referred to as the Project Woodlawn Parcel.

Each of the four parcels, where historic industrial activity has taken place, has been investigated and remediated (or is being remediated) to meet Pennsylvania’s Non-Residential Statewide Health Standards, site-specific risk-derived standards or Maximum Contaminant Levels (MCLs) for soils, groundwater and surface water.

EPA’s Final Decision includes institutional and engineering controls. EUSA and ICIA must provide a restrictive deed notice for groundwater use and land use for all parcels. The restrictive deed notice is to ensure that the land is to be used for only non-residential purposes, and the groundwater is to be used only for non-potable and non-agricultural purposes. In addition, EMI must continue to implement the groundwater monitoring program agreed to by EPA, PADEP and EMI. This program is detailed in a September 17, 2003 letter from PADEP to EMI. This program will be implemented by PADEP through a Consent Order which will be issued subsequent to EPA’s Final Decision.

As the Facilities operated under RCRA Interim Status until they shut down, EMI has continuing RCRA clean-up obligations under both EPA and PADEP. PADEP’s Consent Order will address EMI’s environmental obligations, including the on-going groundwater monitoring program. Upon issuance of this Final Decision, EMI’s RCRA Corrective Action obligations with EPA will be completed.

This proposal to designate the Facilities as Corrective Action Complete with Controls is consistent with current EPA guidance entitled “Final Guidance on Completion of Corrective Action at RCRA Facilities (February 25, 2003).”

B. Act 2 at EUSA – Corona and Wakefield

In April 2004, EPA Region III and the Commonwealth of Pennsylvania Department of Environmental Protection (“PADEP”) entered into a One Cleanup Program Memorandum of Agreement (“MOA” or “Agreement”) to, among other things, facilitate PADEP’s implementation of Pennsylvania’s Voluntary Cleanup Program (“VCP”) under the authority of Act 2 and to promote the One Cleanup Program initiative by working together in a coordinated manner to avoid duplication of effort at properties subject to RCRA and to ensure the remediation of such properties in a timely fashion. The Agreement describes the circumstances in which EPA will use Final Reports submitted pursuant to the VCP of Act 2 to issue final decisions regarding corrective action completions at certain facilities.

At two parcels on the EUSA Facility (Corona and Wakefield), PADEP has approved the Final Reports submitted pursuant to Act 2. An Act 2 Release of Liability has been provided to EUSA for areas which have been remediated. EPA, PADEP, and EUSA have worked together throughout this process to ensure that the corrective actions performed by EUSA under the VCP of Act 2, and the Final Reports submitted to PADEP documenting its actions, would provide the information necessary for EPA to issue a final decision regarding corrective action completion at the parcels.

EPA has reviewed the reports submitted to PADEP on behalf of EUSA pursuant to Act 2, the PADEP letters of approval, the results of soil and groundwater sampling activities, historical investigations and reports of remedial activities conducted at the parcels. As a result of this review, EPA has determined that EUSA has met its RCRA Corrective Action obligations at the two parcels, and that these parcels can be designated “Corrective Action Complete with Controls.”

PADEP’s approval of EUSA’s Final Reports, include that EUSA provide a restrictive deed notice for groundwater use and land use. The restrictive deed notice is to ensure that the groundwater and the land are to be used only for non-residential purposes.

II. Facility Background

A. Ownership

The Tamaqua plant was originally built in 1906 by the Potts Powder Company to produce dynamite and blasting powders. Atlas Powder (“Atlas”) was formed in 1912 as a result of an antitrust suit by the United States against E. I. du Pont de Nemours Powder Company that forced the breakup of du Pont’s explosive business into three companies: DuPont, Hercules Powder and Atlas. Atlas bought the Potts Powder Company in 1912 and expanded the Tamaqua plant to

make all grades of dynamite and detonators. The Tamaqua facility is sometimes called the Reynolds facility.

In 1918, Atlas established the Reynolds Experimental Laboratory (“RXL”) at Tamaqua. This laboratory was established to develop explosive ingredients and firing devices.

Atlas Powder changed its name to Atlas Chemical Industries Inc. in 1961. In 1971, Atlas was merged into Imperial Chemical Industries and became ICI America. However, due to antitrust objections to the merger raised by the United States, ICI America sold part of the Tamaqua facility in 1973, approximately 2620 acres, consisting of the dynamite, nitroglycerin, and blasting supplies businesses, to Tyler Industries, which formed a “new” Atlas Powder Company. The remaining assets at Tamaqua, approximately 103 acres, comprised a portion of the Aerospace Components Division, a subsidiary of Imperial Chemical Industries, and did business as ICI America (the name change to ICI Americas occurred in 1977) or ICIA herein.

Imperial Chemical Industries PLC Group repurchased the explosives business from Tyler in 1990 and established it as a wholly owned subsidiary, ICI Explosives USA, Inc. or EUSA herein. In 2001, ICI Explosives USA Inc. changed its name to E-One Holdings and transferred its assets, including the Tamaqua property, into a newly created subsidiary known as Expert Management, Inc. (EMI). In 2003, ICIA was also consolidated under EMI. The total plant property for Tamaqua was about 2,741 acres.

The ICIA and EUSA operations at Tamaqua ceased between 1996 and 1998. In order to expedite investigation, clean-up and potential resale of the property, EUSA was divided into four parcels: Corona, Wakefield, Project Riverdale and an unnamed clean parcel that had not been impacted by industrial activity. The ICIA property is known as Project Woodlawn throughout the document submissions. All of the property has been sold or transferred to other parties as follows:

- In October 1997, the nitroglycerin operations at EUSA, the “Corona” area comprising about 662 acres, were sold to Copperhead Chemical (or “CCCI”).
- Approximately 1490 acres of land that had never been affected by plant operations were transferred to the Pennsylvania State Game Commission on December 1, 1998 (formerly EUSA).
- An additional 227 acres, the “Wakefield” area (formerly EUSA), was sold to Copperhead Chemical on January 4, 1999.
- On December 17, 2004 EMI sold 103 remaining acres, designated as the “Project Woodlawn” area of the property (formerly ICIA), and 259 acres designated as the “Project Riverdale” area of the property (formerly EUSA) to Bella Terra Farms LLC, an adjacent property holder; this sale terminated EMI’s land holdings in Pennsylvania.

Attachment A provides a map of current property ownership.

B. Operation

EUSA and ICIA are located approximately five miles southwest of the Borough of Tamaqua in Schuylkill County, Pennsylvania. The properties are primarily undeveloped and mostly wooded with several dirt or paved road. Surrounding properties are mostly rural.

Throughout their lives, the Facilities have been used for explosives fabrication as well as loading, assembling, packaging and testing of the materials. The plants produced bombs, torpedoes, starter cartridges, blasting caps, fuses and primers for private industry as well as military applications. They also produced vasodilator drugs (nitroglycerin) for the medical community. There was also an on-site wastewater treatment system that included evaporation and treatment of explosive residues, the use of catch tanks, an oil recovery system and neutralization. The Tamaqua plants also disposed of explosive wastes and waste solvents, including bomb plant waste on-site. Explosive wastes were containerized and taken to the several burning areas for disposal.

The plants shut down operations between 1996 and 1998. Most plant operations and buildings on the Sites have been demolished and removed; the exception being the operations on the Corona and Wakefield parcels that were sold to CCCI.

A number of units that managed solid and hazardous wastes were identified in the RCRA Facility Assessment (RFA) for each facility. These Solid Waste Management Units (SWMUs) are listed in Attachment B, as well as their ultimate disposition.

III. Summary of the Environmental Investigation

The objectives of the Remedial Investigation activities were to evaluate environmental conditions at the Facilities, to demonstrate attainment of Remediation Standards, to support a petition for a Release of Liability from PADEP for Corona and Wakefield parcels, to receive a Final Decision from EPA, and to achieve site closure. To achieve these objectives, ICIA and EUSA completed a series of soil, groundwater, and surface water investigations which included sampling of monitoring wells, surface water sampling and sampling of soils in order to demonstrate attainment of State Health Standards, MCLs, site specific standards and pathway elimination for all media. As it was often not possible to determine whether the contamination originated from a RCRA-regulated unit or a pre-RCRA unit, and therefore whether PADEP or EPA had primacy, the environmental investigation proceeded as a joint effort, with both agencies approving the work. This work has been documented in numerous reports submitted to EPA and PADEP and is found in EPA's Administrative Record.

IV. Investigation Results

A. Soil Contamination

The site-wide remedial investigations began in the 1980's with assessment of the SWMUs and other areas that may have been impacted by industrial activities.

Risk assessments were used for the Corona and Wakefield parcels to address the lead, arsenic and mercury found in the soil, groundwater and surface water. Most samples that exceeded Non-Residential Statewide Health Standards were still at relatively low concentrations. The risk assessment for Wakefield showed that none of the Constituents of Interest were at a level of concern for non-residential uses of the property. In addition, a site specific standard for lead of 9600 mg/kg was approved by PADEP for surface soils at the Corona parcel.

Most of the areas in Project Riverdale and Project Woodlawn were found not to exceed the Non-Residential Statewide Health Standards for soils. The areas of the parcels found to exceed Standards, and therefore requiring additional investigation, were primarily the burning and disposal areas. These are listed below:

ICIA – Project Woodlawn

Open Burn Pit - AAP #16

Pit 1 - AOC

Match Comb Pile/Pit 2 - AAP # 15/AOC

Bermed Test Exploding Area - AAP AOC A

Temporary Staging Areas A, B and C - AOCs

Empty Drum Storage Area - AAP #25

EUSA – Project Riverdale

Waste Pile - AOC

Slurry Pits - USA #29

Burning Bays - USA #28

Temporary Burning Grounds Staging Area- AOC

Cap Reject Pit - USA #31

Historic Fill Area -AOC

In 1999, ICIA completed removal and disposal of all waste materials from Project Woodlawn and excavation of soil hot spots which were identified by appearance of the surface soils or historical data. At the same time, EUSA removed the slurry pits and most of the burning areas on Project Riverdale. This overall removal effort culminated in 25,000 tons of soils being taken off-site during the summer of 1999. The Open Burn Pit (ICIA) and the Burning Bays (EUSA) required additional excavation for residual lead contamination.

During this large-scale investigation/excavation several historic contaminated areas were discovered. At Project Woodlawn, ICIA discovered a previously unknown waste management unit, which was denoted Pit 1. It contained inert wastes and solvent contamination. Using historical aerial photos, ICI subsequently dug test pits throughout the Project Woodlawn Area. Pit 2 was encountered beneath Match Comb Pile and contained inert waste and other inorganic debris. In addition, organic-contaminated soils were encountered at the Bermed Test exploding Area. These newly discovered areas were excavated and residual soils removed.

During the decommissioning of the Temporary Burning Bays on Project Riverdale, EUSA discovered that a Historic Fill Area nearby had significant concentrations of lead. Two rounds of excavation have taken place to a depth of two feet below original grade. A report was submitted on January 13, 2006, proposing that the lead contamination that remained was not of

concern. Based on predicted blood lead levels for three scenarios, PADEP agreed that no further action was needed for the Historic Fill Area on April 27, 2006.

Post excavation sampling for the units listed above were submitted to EPA and PADEP. Based on the comparison to the available Non-Residential Statewide Health Standards for soil and approved risk assessments, EPA has determined that residual chemicals in soil do not pose a threat to human health under an industrial land use scenario. The surface soil results attained either the Statewide Health Standards or the site-specific standard for direct contact. Residual subsurface contamination remains, however it is below the Statewide Health Standards for direct contact. This subsurface residual is covered by at least 5 feet of soil, and therefore there is no complete exposure pathway.

B. Groundwater Contamination

The groundwater investigation showed two distinct areas of contamination exceeding the media clean-up goals; nitrate levels at the slurry pits at EUSA; and VOC contamination at the burning and disposal areas near the Open Burn Pit at ICIA. The groundwater clean-up goals at this site are MCLs, which are health-based drinking water standards. There are private wells in the area used for potable purposes. Although none of the private wells are downgradient of the plume, MCLs were agreed to be an appropriate remediation goal.

Groundwater - EUSA

A characterization of groundwater quality at Project Riverdale was completed during the facility-wide investigation. Nitrate in the groundwater near the Project Riverdale slurry pits, SWMU # 29, was found to be the only constituent above its MCL of 10 mg/l. Waste and surrounding soils were removed from the unit in 1999.

Quarterly groundwater monitoring occurred between 1992 and 2001. Data from 1999 through 2001 showed the effect of the waste removal on groundwater quality. Results showed a drop in nitrate levels from 68 mg/l at the end of 1999 to 13 mg/l one year later. EUSA applied for an Alternate Concentration Limit (ACL) for nitrate in groundwater at the slurry pits, citing the following:

- 1) The groundwater near this unit is not used for potable purposes and would not be in the future due to its location and the use restriction placed in the deed.
- 2) The Little Schuylkill River is the only receptor of the groundwater. There is no impact to the River, as shown by monitoring data upriver and downriver of the slurry pits (1 mg/l vs. 1.1 mg/l).
- 3) Groundwater levels of nitrate have been consistently decreasing since the waste was removed.

PADEP, with EPA agreement, approved a nitrate ACL of 130 mg/l on October 22, 2001. Groundwater monitoring at Project Riverdale was discontinued at that time. There is no complete exposure pathway.

Groundwater – ICIA

ICIA had been pumping and treating the groundwater in the vicinity of the Project Woodlawn burning and disposal areas: Open Burn Pit, Match Comb Pile, Bermed Test Exploding Area, Pit 1 and Pit 2 since 1996, under a Groundwater Abatement Plan, which was part of the 1986 PADER Consent Order and Agreement. These units were unlined areas where hazardous wastes were either burned or managed in a waste pile. Investigations had shown elevated levels of volatile organic constituents (VOCs) in the groundwater, primarily, trichloroethene (TCE), 1,1,1-trichloroethane (1,1,1-TCA), and cis-1,2-dichloroethene (1,2-DCE).

In 1999, PADEP approved a trial shut-off of the pumping system in order to determine if 1) the system was effective in containing the plume in fractured bedrock, 2) natural biodegradation of the organic contaminants was occurring, and 3) monitored natural attenuation was a viable remedial option. During the shut-off, an upgraded monitoring plan provided monthly data on the groundwater quality for one year.

During the site-wide investigations, additional historic disposal areas were found. Eight additional wells were added to the monitoring network to assess the impacts of all the disposal units on groundwater. Two springs in the area and the Little Schuylkill River were also were sampled to determine if the contamination was affecting surface water on the site. All disposal areas and other areas of contamination were excavated and their wastes removed during a large-scale removal effort in the summer of 1999.

A final report on the temporary shut-off was submitted in January 2001 and was evaluated by EPA and PADEP. This data showed that 1) the now shut-down pump-and-treat system had likely not been containing the entire groundwater plume; 2) the plume size and concentration diminished during the shut-down, most likely attributable to the removal of the waste materials from the disposal areas; and 3) there is evidence of natural biodegradation of contaminants occurring. The data also showed that groundwater in the disposal areas is in bedrock and flows northwest, toward the Little Schuylkill River. The surface water investigation showed no impacts to the springs or the River. The pump-and-treat system was subsequently removed.

Subsequently, PADEP approved a reduced-frequency monitoring program for 2001 and 2002. Following this, the Facility submitted a proposal for future Monitored Natural Attenuation based on the findings of the 2001/2002 monitoring program. This Monitored Natural Attenuation plan has been approved by PADEP, and agreed to by EPA in a September 17, 2003 letter. Three on-site wells and one off-site well will be monitored on an annual basis. Every five years, an additional six wells will be sampled for a more detailed view of the plume dynamics.

Currently, monitoring shows continuing reduction in contaminant concentrations. Natural attenuation of the chlorinated compounds in the form of “reductive dechlorination” is the

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presumed means by which VOC concentrations are decreasing. This is a process where microbes utilize the chlorinated compounds as a food source. This in turn alters the VOC structure and creates breakdown products. Review of the breakdown compounds such as 1,2-DCE indicate the natural attenuation process is well established. In the location of the source area, the breakdown product 1,2-DCE levels are substantially higher than the original source material of TCE.

Since the source area (MW08C) continues to show TCE and 1,2-DCE levels considerably above their MCLs of 5 ug/l and 70 ug/l, respectively, the groundwater in this area is expected to take significant time to achieve clean-up goals. The TCE concentration has fluctuated over the years as site operations and later excavations were performed. In 1990, the TCE level was 2700 ug/l. It decreased to 361 ug/l after excavation activities in 1999, and gradually increased as the excavations were filled in and the site returned to steady-state conditions. Currently, TCE concentration is 940 ug/l in the source area. Continued monitoring is expected to show a gradual decrease in concentration over the long-term.

During this same period, 1,2-DCE concentrations show that biodegradation is taking place at the source area. As it is not an original source contaminant, and is found as a breakdown product, its increasingly high levels indicate that natural dechlorination is occurring. After excavation activities in 1999, 1,2-DCE concentration was 1260 ug/l at the source area. By 2006, the concentration had increased to 2300 ug/l. Continued monitoring is expected to show fluctuation in the concentration as the dechlorination process continues, with an eventual decrease.

The TCE concentration at the downgradient edge of the plume (MW20) has reduced from 82.1 ug/l in 1999 to 16 ug/l in 2006 and the 1,2-DCE concentration has decreased from 260 ug/l to 120 ug/l in the same period of time. Future monitoring is expected to show continued decrease in concentration of both constituents.

For 1,1,1-TCA, the MCL of 200 ug/l has been achieved throughout the plume. In 1990, the concentration was 600 ug/l in the source area. By 1999, it had decreased to 210 ug/l in this area and since 2000, it has been below MCLs throughout the plume; the highest reading has been 138 ug/l.

Including the use of land use controls, an access agreement, an ACL and continued monitoring, the EUSA and ICIA Sites have attained compliance with RCRA Corrective Action requirements for groundwater.

C. Surface Water

The Little Schuylkill River, Brushy Run, Stump Run and two on-site springs have been monitored as part of the site-wide environmental investigation to evaluate whether groundwater plumes were adversely impacting surface water quality. Data collected from the surface water indicate no evidence of adverse impacts when compared to Pennsylvania's Water Quality Criteria, when upstream and downstream data are compared, or through the Wakefield risk

assessment. The surface waters do not show any impact from potential groundwater discharges to the surface water on the site. There are no complete exposure pathways.

D. Off-site Groundwater

ICIA

Off-site contamination is occurring in two distinct areas. The property to the north of ICIA's Project Woodlawn disposal area has a small corner impacted by the ICIA burning area plume previously described in Section IV.B. Groundwater Contamination, above. In 1999, two wells (MW24 and MW25) were placed on the property to define the lateral extent of the plume. There was an existing monitoring well from 1990 on this property that was used as a background well. MW24 is being sampled on an annual basis, as part of the on-site monitoring program and MW25 will be sampled every five years. Historically, MW24 has shown levels of TCE slightly above the MCL of 5 ug/l. In 1999, just after the excavation of source materials on-site, the TCE level was 18 ug/l. In 2006, the concentration had decreased to 5.8 ug/l. MW25 has historically shown concentrations near its 2000 reading of 10 ug/l. Future monitoring is expected to show decreasing concentrations in MW24 and MW25. This property is zoned agricultural and the owner does not use the groundwater. EMI currently has an access agreement with the owners to continue sampling and will maintain this agreement as long as groundwater monitoring is required.

The area to the southeast of ICIA is known as the Clamtown Area. The property bordering ICIA, southeast of the Project Woodlawn disposal area has an on-site potable well showing intermittent small detections of TCE, but none above MCLs. ICIA had placed a triple carbon filtration system on the well, however the owners bypassed the system and filters were subsequently removed. A second well was used for potable purposes at a trailer on the property. A triple carbon filtration system was also placed on this well and bottled water provided for drinking. The TCE level at this well reached 9.6 ug/l at a sampling port before the filters, but TCE was not detectable at the tap; there was no exposure to contaminants. Another was a pond well which was to be used for fire fighting purposes but was never needed. Although the TCE level reached 30 ug/l, there was no exposure from groundwater at this well as it was not used for any other purpose. Both of these wells were closed using EPA's well closing protocol in 2004. There is no exposure to the residents from groundwater contamination. Although this property appears side-gradient to the ICIA disposal area, the Site is underlain fractured bedrock and groundwater may have a secondary directional component.

Well MW19 is located in the far upgradient corner of the Project Woodlawn parcel. The data from this well shows groundwater quality of any groundwater flow component toward the Clamtown Area. MW19 has shown some hits of TCE above MCLs, the highest being 41 ug/l. Currently, the TCE level is 3.2 ug/l, below the MCL. MW19 is part of the annual monitoring well network, and acts as a sentry well for any groundwater flowing toward Clamtown Area.

Based on the characteristics of the groundwater flow, the annual monitoring program and data showing no potable wells are contaminated, future off-site exposure pathways are also expected to be incomplete.

E. Ecological Screening

Chemical constituents detected on site in soil and groundwater are not considered to be at levels of ecological concern. An October 1999 Macroinvertebrate Survey and Assessment for Brushy Run and the Little Schuylkill River was submitted by ICIA and EUSA. It presents data showing that that site activities have not affected the River and the Creek. Exposure pathways are incomplete.

F. Final Reports

PADEP approved the Final Reports submitted on behalf of EUSA for the Corona and Wakefield Parcels in September 1998 and January 2002, and, pursuant to Act 2, granted EUSA a Release of Liability for each parcel.

V. Control Activities

A. Soil

Complete exposure pathways to site soils do not exist at the Facility because the contamination levels of the soil are below the Pennsylvania Non-Residential Statewide Health Standards for direct contact, a site-specific risk-derived level, or are addressed through an approved risk assessment. In addition, any residual subsurface contamination has been covered by at least 3 feet of clean soil, further ensuring an incomplete pathway.

As an institutional control, ICI developed a set of land use restrictions for both ICIA and EUSA properties. Only non-residential use of the property is permitted, and disturbance of subsurface must follow proper soils handling and disposal practices. This Declaration of Covenants and Restrictions has been agreed to by the new property owners for both the ICIA and EUSA Sites, and has been properly recorded in the deeds.

Compliance with RCRA Corrective Action requirements for soils has been attained with the use of land use controls, risk assessments and site-specific clean-up levels.

B. Groundwater

Both engineering and institutional controls are ensuring an incomplete exposure pathway. EMI is continuing to monitor the on-site and off-site groundwater contamination to confirm that the plume does not grow or move, and that the natural biodegradation activities further reduce the toxicity of the contaminants. EMI will perform the groundwater monitoring activities in accordance with PADEP's September 17, 2003 letter. Three on-site wells and one off-site well will be monitored on an annual basis. Every five years, an additional six wells will be sampled for a more detailed view of the plume dynamics.

ICI developed a set of groundwater use restrictions for both ICIA and EUSA properties. Only non-potable and non-agricultural use of the groundwater is permitted. This Declaration of

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Covenants and Restrictions has been agreed to by the new property owners for both the ICIA and EUSA Sites, and has been properly recorded in Schuylkill County.

Including the use of land use controls, an access agreement, an ACL and continued monitoring, the EUSA and ICIA Sites have attained compliance with RCRA Corrective Action requirements for groundwater.

VI. Action by EMI

To confirm that groundwater quality is improving, EMI will continue to monitor groundwater at the ICIA facility on an annual basis. EMI will perform the groundwater monitoring activities in accordance with PADEP's September 17, 2003 letter. The groundwater sampling program will continue until MCLs are achieved. EMI may submit a report to PADEP to request termination of groundwater sampling, once sufficient data has been collected to show that the remediation goals have been met.

EMI has already properly recorded the land use and groundwater use restrictions at the time the parcels were sold or transferred to the new owners.

VII. Evaluation of Criteria

This section provides a description of the criteria EPA uses to evaluate proposed final remedies under the Corrective Action Program. The criteria are applied in two phases. In the first phase, EPA evaluates three remedy threshold criteria as general goals. In the second phase, for those remedies which meet the threshold criteria, EPA then evaluates seven balancing criteria to determine which proposed remedy alternative provides the best relative combination of attributes.

A. Threshold Criteria

1. Protection of Human Health and the Environment

Numerous surface water sampling events have not indicated any evidence to suggest that Little Schuylkill River, Brushy Run or the two on-site springs have been negatively impacted from groundwater discharges to the creek.

An evaluation of potential impacts to human and ecological receptors from the Sites conditions was completed in accordance with all applicable and appropriate PADEP and EPA rules and regulations.

The only possible exposure route to contaminated groundwater or soil at the Facilities is to workers taking environmental samples or to workers excavating soil at the facility. Therefore, the deed notice restricts states that the subsurface soils throughout the Property should not be disturbed or excavated unless proper materials handling and soil disposal practices are followed.

2. Achieve Media Cleanup Standards

Site investigations completed by ICIA and EUSA demonstrate that levels of metals such as lead, antimony and mercury in soil are either below the Pennsylvania Non-Residential Statewide Health Standards or site-specific risk-derived standards.

Historic groundwater data indicates that concentrations of 1,1,1-TCA at ICIA have steadily declined and now the clean-up standard has been achieved throughout the plume.

Data also shows that concentrations of VOCs, such as TCE and 1-2, DCE in groundwater at ICIA have steadily declined at the edges of the plume, although concentrations at the source area have remained consistently high. EMI will continue to monitor the groundwater conditions at the Site to ensure that groundwater quality continues to improve.

3. Control the Release(s)

Sampling results support the determination of lack of impacts to surface water from each Site's groundwater.

The Facilities have filed a Declaration of Covenants and Restrictions with the deed to each parcel of the Properties which provide notice that groundwater use of the property is limited to non-potable and non-agricultural purposes.

EPA, PADEP and EMI have agreed on a continuing monitoring program for the Project Woodlawn parcel groundwater which requires scheduled monitoring of specified wells. This agreement was detailed in PADEP's September 17, 2003 letter, and addresses on-site and off-site contamination. The monitoring program will be incorporated into a Consent Order issued by PADEP subsequent to EPA's Final Decision for ICIA and EUSA.

B. Balancing Criteria

Because the proposed remedy consists of measures which have already been either completed or implemented, and because EPA is satisfied that the proposed remedy is protective of human health and the environment, EPA is not choosing among alternative remedies. Therefore, an evaluation of the balancing criteria is unnecessary. Nonetheless, EPA presents the seven criteria below to illustrate the suitability of the proposed remedy:

1. Long-Term Reliability and Effectiveness

The Facilities' investigations and remediation activities have addressed soil and groundwater contamination at the Sites. PADEP will oversee the groundwater monitoring activities and evaluate the continued effectiveness of ICIA's groundwater monitoring program.

EPA also considers the restrictions of on-site groundwater use and land use of the property to non-residential purposes as long-term components of the control activities. Deed notices have been filed with all property transfers and sales, providing for specified limited use of the property.

2. Reduction of Toxicity, Mobility, or Volume of Wastes

Unacceptable or complete exposure pathways do not exist at this facility. This has eliminated the potential for direct contact exposure and reduced the mobility of the contaminants as well.

3. Short-Term Effectiveness

The short-term effectiveness of a remedy is related to the risks posed to the community and workers involved in the design, construction and implementation of the remedy. The short-term risks posed by the proposed remedy for the Facility are minimal, as Site activities have already been completed for the remedy. Contamination is below established Statewide Health or risk based standards and monitoring is expected to continue.

In addition, continued monitoring provides information regarding environmental conditions and provides a basis for EMI to respond to changes in the future, if necessary.

4. Implementability

Implementability includes the technical and administrative feasibility of constructing and operating the proposed remedy. The proposed remedy for the Facilities is both technically and administratively feasible. EMI has continuing RCRA obligations to both EPA and PADEP to clean-up groundwater. The groundwater monitoring technology and protocol for ICIA are already in place and have been agreed to PADEP, EPA and EMI. Further, a Consent Order between PADEP and EMI, to be issued subsequent to EPA's Final Decision, will be the instrument through which the continued groundwater monitoring system will be implemented. EPA, PADEP and EMI agreed upon the well network and monitoring schedule and this was documented in a September 17, 2003 letter from PADEP to EMI.

5. Cost

ICIA and EUSA have already expended the capital costs involved in performing the investigations and remedial activities necessary to meet non-residential standards for soils for both Facilities and in implementing the proposed control activities at the ICIA Site. PADEP requires a bond for the site, inclusive of the continued groundwater monitoring. EMI has acquired a bond in the PADEP-approved amount of \$325,000 for 25 years of monitoring (2003-2028).

6. Community Acceptance

EPA will provide public notice and an opportunity for comment to any interested parties before this proposed decision becomes final.

7. State Acceptance

EPA's proposed determination that the ICIA and EUSA Facilities are Corrective Action Complete with Controls is based upon the activities performed by ICIA and EUSA pursuant to the requirements of RCRA and Corrective Action. ICIA and EUSA have met (or are meeting) final cleanup goals, have assessed the entire Facilities, and have addressed all releases, including all SWMUs and AOCs, identified by PADEP and EPA.

PADEP has worked in concert with EPA throughout the investigation, remediation and monitoring of the Sites. All data and reports have been submitted to and evaluated by both EPA and PADEP. Two parcels on the EUSA property have entered into Pennsylvania's Act 2 Program. A 662-acre parcel, "Corona", received a Release of Liability on September 9, 1998, and a 227-acre parcel, "Wakefield", was issued a Release of Liability on January 3, 2002.

Subsequent to EPA's Final Decision, PADEP plans to issue a Consent Order which will address the site environmental conditions and continued groundwater monitoring at ICIA Project Woodlawn.

VIII. Environmental Indicators

EPA has established two environmental indicators that are designated to measure the human health and groundwater impacts of RCRA facilities. These two indicators use environmental data and apply a decision matrix to determine that human health impacts are "under control" and that groundwater contamination is "under control". ICIA and EUSA met the human health indicator at their respective Facilities on October 05, 2001. EUSA met the groundwater indicator on June 10, 2003, and ICIA met it on October 04, 2005. EPA believes that these environmental indicators provide additional evidence that the actions completed and proposed for ICA and EUSA have been effective and will protect human health and the groundwater at the Facilities in the long-term.

IX. Public Participation

EPA is requesting comments from the public on its determination that the Facilities are Corrective Action Complete with Controls. On _____, EPA placed an announcement in the local newspaper, _____, to notify the public of the availability of this Statement of Basis, its supporting Administrative Record, and the public's opportunity to request a public meeting on EPA's proposed corrective action for the Facilities. The public comment period will last thirty (30) calendar days from the date that this matter is publicly noticed in a local paper. Comments should be sent to EPA in writing to the address listed below, and anyone submitting comments will receive a copy of the final decision and a copy of the response to comments.

A public meeting will be held upon request. Requests for a public meeting should be made to Ms. Linda Matyskiela of the EPA Regional Office at the address listed below or at 215-814-3420.

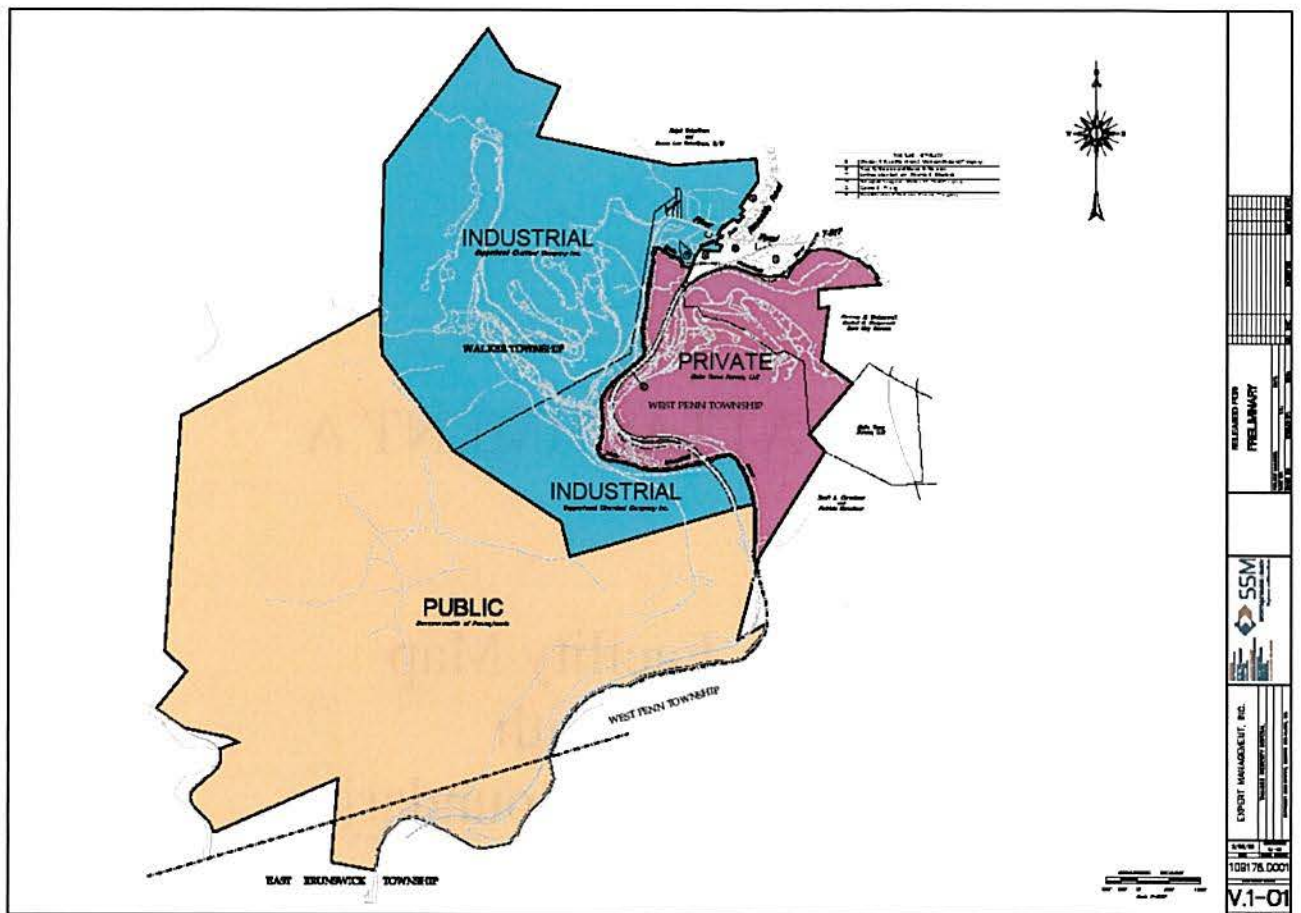
The Administrative Record contains all information considered by EPA when making this determination. The Administrative Record is available for review during business hours at the following location:

U.S. Environmental Protection Agency Region III (3WC22)
1650 Arch Street
Philadelphia, PA 19103
Contact: Linda Matyskiela
Phone: 215-814-34205 Fax: 215-814-3113
E-mail:matyskiela.linda@epa.gov

Following the thirty (30) day public comment period, EPA will prepare a Final Decision and Response to Comments in which it will identify the selected remedy for the Facilities. The Response to Comments will address all significant written comments and any significant oral comments generated at a public meeting, if such a meeting is held. The Final Decision and Response to Comments will be made available to the public. If, on the basis of such comments or other relevant information, significant changes are proposed to be made to the remedies for the Facilities as proposed by EPA in this Statement of Basis, EPA will seek additional public comments on any proposed revised remedy.

ATTACHMENT A

Facility Map with Property Boundaries



ATTACHMENT B

SWMU List for ICIA and EUSA

**Areas Identified in the respective RFA's of ICI Americas Inc. and ICI Explosives USA, Inc.
now known as Expert Management Inc. Tamaqua, Pennsylvania**

UNIT NAME	UNIT DESCRIPTION	DISPOSITION	STATUS
PAD071203046	Former ICI Explosives USA Inc.		
USA-SWMU #1	Process Catch Tank #293, 2500 gallon rectangular stainless steel tank with containment basin. Used to evaporate liquids accumulated from floor drains of dry houses (removed), and rinsate of LMNR process. KO44 / K066 generation point. Treated @ SWMU #28.	Eliminated with demolition of structure (1999).	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #2	Process Catch Tank #212, 375 gallon 3' diameter x 5' deep. Used to evaporate liquids accumulated from floor drains of the former cap line. K044 / K066 (?) generation point. Treated @ SWMU #28.	Eliminated with demolition of the Cap Line (1992). Flashed interior, and recycled metal tank.	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #3	Process Catch Tank, baffled 4' x 3' x 5' stainless steel, accumulated K044 / K046 (?) from nitromannite production process for treatment @ SWMU #28.	Shutdown in 1997, demolished in 1998 with building. Flashed interior, and recycled metal basin.	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #4	Acetone Recovery System, generated F003, acetone still bottoms from nitromannite production process.	Shutdown in 1997, demolished in 1998 with building. Flashed interior, and recycled metal basin.	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #5	Nitromannite Neutralization Sump, 5,000 gallon brick lined basin used to neutralize acidic nitration rinse waters.	Shutdown in 1996, demolished in 1997; all debris shipped off-site to permitted facility.	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #6	Nitromannite Equalization Sump, 10,000 gallon concrete basin used to regulate flow of liquid from SWMU#5 to site NPDES permitted treatment plant.	Shutdown in 1996, demolished in 1997; all debris shipped off-site to permitted facility.	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #7	Shelldraw Grit Chamber, 20' long by 2' wide by 1' deep trough used to screen grit from blasting cap shell washing operation, lead into SWMU#8.	Shutdown in 1992, removed as part of building demolition in 1993. All debris shipped off site to permitted facility.	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #8	Shelldraw Oil Separator Basin, 3200 gallon baffled oil / water separator. Generated oil for reclamation. Tied into SWMU # 11.	Shutdown in 1992, removed as part of building demolition in 1993. All debris shipped off site to permitted facility.	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #9	Shelldraw Reaction Tank, 100 gallon tank with mixer.	Shutdown in 1992, removed as part of building demolition in 1993. All debris shipped off site to permitted facility.	Soils addressed as part of the site Corrective Action Program.

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UNIT NAME	UNIT DESCRIPTION	DISPOSITION	STATUS
PAD071203046	Former ICI Explosives USA Inc.		
USA-SWMU #10	Shelldraw Flotation Tank, gallonage unknown, approximately 5' diameter by 7' deep.	Shutdown in 1992, removed as part of building demolition in 1993. All debris shipped off site to permitted facility.	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #11	Shelldraw Sludge Holding and Thickening Tank. approximately 900 gallons.	Shutdown in 1992, removed as part of building demolition in 1993. All debris shipped off site to permitted facility.	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #13	Wastewater Equalization Tank: inside building 992	Shutdown 1998	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #14	Neutralization Basin No.1: in Denitration Facility	Never managed or released hazardous waste.	Soils in area were addressed as part of the site Act 2 Program.
USA-SWMU #15	Neutralization Basin No.2: in Denitration Facility	Never managed or released hazardous waste.	Soils in area were addressed as part of the site Act 2 Program.
USA-SWMU #16	Sanitary Treatment Plant	Shutdown 1998	Soils in area were addressed as part of the site Act 2 Program.
USA-SWMU #17	Drummed Hazardous Waste Storage Facility	Clean-closed under PADEP	Soils in area were addressed as part of the site Act 2 Program.
USA-SWMU #18	Emulsion Plant Wastewater Filter	Dismantled 1988	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #19	Sodium Sulfonate Treatment Tank	Dismantled 1988	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #20	Former Emulsion Wastewater Evaporation Holding Tank No.1 : 2500 gallon	Dismantled 1982	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #21	Former Emulsion Wastewater Evaporation Holding Tank No.2 : 2500 gallon	Dismantled 1982	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #22	ARDL Pilot Plant Wastewater Holding Tank No.1	Dismantled 1993	Soils addressed as part of the site Corrective Action Program.

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UNIT NAME	UNIT DESCRIPTION	DISPOSITION	STATUS
PAD071203046	Former ICI Explosives USA Inc.		
USA-SWMU #23	ARDL Pilot Plant Wastewater Holding Tank No.2	Dismantled 1993	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #24	Former ARDL Centrifuge System	Shutdown prior to 1960	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #25	ARDL Wastewater Tank Trailer	Shutdown 1993	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #26	Packaging Lab Wastewater Holding Tank	Shutdown unknown	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #27	Packaging Lab Wastewater Holding Truck	Shutdown prior to 1991	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #28	Burning Grounds; RCRA regulated facility used to thermally treat explosives and potentially reactive materials. Consists of an area approximately 600' in length by 150' wide, made up of seven bays constructed of soil on three sides each, with an approximate height of 5'.	Discontinued usage (1999), excavated and shipped 25,000 tons of impacted soils off site to TSDF.	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #29	Slurry Pits; three 8' - 10' wide pits, approximately 7' - 8' deep by approximately 50' - 60' in length. Pits contain emulsion residue.	Discontinued usage in the 1970's.	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #30	Match Head Burning Area; 16' long x 3" deep x 6" wide trough located south of building 669. Matches with mononitroresorcinol were burned with oil.	Abated by excavation prior to 1989 installation of flood control berm.	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #31	Cap Reject Pit, 4' x 4' x 10' building with approximately 4' of sand in floor where off spec caps were initiated.	Demolished (1991), wastes in soils were shipped to a permitted facility.	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #32	Empty Drum Storage Area	Removed between 1982 and 1990.	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #33	Drums of Oily Grit near Shelldraw.	Abated (1991) Drums shipped off-site to permitted facility.	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #34	Drums of Reclaim Oil near Shelldraw. Abated (1991)	Drums shipped off-site to permitted facility.	Soils addressed as part of the site Corrective Action Program.

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UNIT NAME	UNIT DESCRIPTION	DISPOSITION	STATUS
PAD071203046	Former ICI Explosives USA Inc.		
USA-SWMU #35	Cap Reject Pit Waste Area- Abated (1991)	Surficial contamination shipped off-site to a permitted facility.	Soils addressed as part of the site Corrective Action Program.
USA-SWMU #36	Recyclable Scrap Pile Area	Scrap salvaged (1991)	Soils addressed as part of the site Corrective Action Program.
AOC	Historic Fill Area	Excavated and shipped off site to a permitted disposal facility	Soils addressed as part of the site Corrective Action Program.
AOC	Temporary Burning Grounds Staging Area	Excavated and shipped off site to a permitted disposal facility	Soils addressed as part of the site Corrective Action Program.
AOC	Waste Pile	Excavated and shipped off site to a permitted disposal facility	Soils addressed as part of the site Corrective Action Program.

*SWMUs #12, #37, #38, #39 listed in the RFA were later determined by EPA to be process tanks, not SWMUs.

**Through agreement with PADEP, all ICI Explosives SWMUs retained the "USA-" designation throughout the ownership changes.

**Areas Identified in the respective RFA's of ICI Americas Inc. and ICI Explosives USA, Inc.
now known as Expert Management Inc. Tamaqua, Pennsylvania**

UNIT NAME	UNIT DESCRIPTION	DISPOSITION	STATUS
PAD000797928	Former ICI Americas Inc.		
AAP-SWMU #1	Building 799, Reactives Accumulation Buckets containing carbonated water for wet collection of reactives containing wipes. Contents taken to SWMU #6 for separation of solids from liquids. Liquids taken to SWMU#8 or #9 for evaporation. Solids taken to SWMU#18 for thermal destruction.	Eliminated with demolition of building (1997). Buckets were burned at SWMU #18.	Soils addressed as part of the site Corrective Action Program.
AAP-SWMU #2	Building 917, Reactives Accumulation Buckets containing carbonated water for wet collection of reactives containing wipes. Contents taken to SWMU #6 for separation of solids from liquids. Liquids taken to SWMU#8 or #9 for evaporation. Solids taken to SWMU#18 for thermal destruction.	Eliminated with demolition of building (1996). Buckets were burned at SWMU #18.	Soils addressed as part of the site Corrective Action Program.
AAP-SWMU #3	Building 886, Reactives Accumulation Buckets containing carbonated water for wet collection of reactives containing wipes. Contents taken to SWMU #6 for separation of solids from liquids. Liquids taken to SWMU#7 for evaporation. Solids taken to SWMU #18 for thermal destruction.	Eliminated by removal, as part of a building remodeling (1995). Building demolished. (1998). Buckets were burned at SWMU # 18.	Soils in area were addressed as part of the site Act 2 Program.
AAP-SWMU #4	Building 992, Reactives Accumulation Buckets containing carbonated water for wet collection of reactives containing wipes. Contents taken to SWMU #7 for separation of solids from liquids. Liquids taken to SWMU#8 or #9 for evaporation. Solids taken to SWMU #18 for thermal destruction.	Eliminated with demolition of building (1997). Buckets were burned at SWMU#18.	Soils addressed as part of the site Corrective Action Program.
AAP-SWMU #5	Building 915, Reactives Accumulation Bucket containing carbonated water for wet collection of reactives containing wipes. Contents taken to SWMU #7 for separation of solids from liquids. Liquids taken to SWMU#12 or #14 for evaporation. Solids taken to SWMU #18 for thermal destruction.	Eliminated with demolition of building (1997). Buckets were burned at SWMU #18.	Soils addressed as part of the site Corrective Action Program.
AAP-SWMU #6	Building 926 Reactives Screening Shed, separated liquid from solid wastes. Liquids taken to evaporator, solids taken to thermal treatment.	Eliminated with demolition of building (1997). All containers were burned at SWMU #18.	Soils addressed as part of the site Corrective Action Program.
AAP-SWMU #7	Building 886 Reactives Screening Shed, separated liquid from solid wastes. Liquids taken to evaporator, solids taken to thermal treatment.	Eliminated by removal as part of a building remodeling (1995). Building demolished (1999). Contents were burned at SWMU # 18.	Soils addressed as part of the site Corrective Action Program.
AAP-SWMU#8	Process Catch Tank #796	Eliminated with demolition of building (1997). All containers were burned at SWMU #18.	Soils addressed as part of the site Corrective Action Program.

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UNIT NAME	UNIT DESCRIPTION	DISPOSITION	STATUS
PAD000797928	Former ICI Americas Inc.		
AAP-SWMU #9	Process Catch Tank #787	Eliminated with demolition of building (1997). All containers were burned at SWMU #18.	Soils addressed as part of the site Corrective Action Program.
AAP-SWMU #10	Process Catch Tank #886, Vacuum Line System	Eliminated by removal as part of a building remodeling (1995). Building demolished (1999). Buckets were burned at SWMU # 18.	Soils addressed as part of the site Corrective Action Program.
AAP-SWMU #11	Process Catch Tank #886	Eliminated by removal as part of a building remodeling (1995). Building demolished (1999). Buckets were burned at SWMU # 18.	Soils addressed as part of the site Corrective Action Program.
AAP-SWMU#12	Process Catch Tank #915A	Eliminated with demolition of building (1997). All containers were burned at SWMU #18.	Soils addressed as part of the site Corrective Action Program.
AAP-SWMU #13	Process Catch Tank #915B,	Eliminated with demolition of building (1997). All containers were burned at SWMU #18.	Soils addressed as part of the site Corrective Action Program.
AAP-SWMU #14	Process Catch Tank #922	Eliminated with demolition of building (1997). All containers were burned at SWMU #18.	Soils addressed as part of the site Corrective Action Program.
AAP-SWMU #15	Former Match Comb Pile – Pit 2, an AOC was found under this SWMU during site investigation	Excavated and shipped off site to a permitted disposal facility (1987).	Soils addressed as part of the site Corrective Action Program.
AAP-SWMU #16	Open Burn Pit	Discontinued usage (1987) wastes shipped 5,000 tons of impacted soils off site with waste from other SWMU's in this area to a permitted disposal facility (1999).	Soils addressed as part of the site Corrective Action Program.
AAP-SWMU #17	Detonator Burning Building	Eliminated with demolition of building (1997). All contents were burned at SWMU #18.	Soils addressed as part of the site Corrective Action Program.
AAP-SWMU #18	Thermal Treatment WOK	Eliminated with demolition of building (1998). All contents were burned prior to demolition, inspected by PADEP, and disposed of offsite at a permitted facility.	Soils addressed as part of the site Corrective Action Program.
AAP-SWMU #19	Former Thermal Treatment Facility Container Holding Area		Soils addressed as part of the site Corrective Action

			Program.
Areas Identified in the respective RFA's of ICI Americas Inc. and ICI Explosives USA, Inc. now known as Expert Management Inc. Tamaqua, Pennsylvania			

UNIT NAME	UNIT DESCRIPTION	DISPOSITION	STATUS
PAD000797928	Former ICI Americas Inc.		
AAP-SWMU #20	Former Building 928, Waste Ash Drum Holding Area		Soils addressed as part of the site Corrective Action Program
AAP-SWMU #21	Magazines	Eliminated with demolition of building (1997). All containers were burned at SWMU #18.	Soils addressed as part of the site Corrective Action Program.
AAP-SWMU #22	Building 2005, Waste Solvent Accumulation Cans	Eliminated with demolition of building (1996).	Soils addressed as part of the site Corrective Action Program.
AAP-SWMU #23	Building 2005 Waste Solvent Accumulation Shed	Eliminated with demolition of building (1996).	Soils addressed as part of the site Corrective Action Program.
AAP-SWMU #24	Former Temporary Storage Area	Eliminated with demolition of building (1996).	Soils addressed as part of the site Corrective Action Program.
AAP-SWMU #25	Former Empty Drum Storage Area – Pit 1, an AOC was found adjacent to this SWMU during site investigation	Eliminated by being sent to a drum recycler / scrap manager (1992).	Soils addressed as part of the site Corrective Action Program.
AAP-SWMU #26	Waste Oil Accumulation	Area Eliminated with demolition of building (1996).	Soils addressed as part of the site Corrective Action Program.
AAP-AOC-A	Bermed Test Exploding Area – also know as Product Device Testing Area	Ceased operations in the 1960's.	Soils addressed as part of the site Corrective Action Program.
AAP-AOC-B	Test Exploding Barricade Area	Temporary testing operation in 1989 only.	Soils addressed as part of the site Corrective Action Program.
AOC	Pit 1	Excavated and shipped off site to a permitted disposal facility	Soils addressed as part of the site Corrective Action Program.
AOC	Pit 2	Excavated and shipped off site to a permitted disposal facility	Soils addressed as part of the site Corrective Action Program.
AOCs	Temporary Staging Areas A, B, and C		Soils addressed as part of the site Corrective Action Program.

**Through agreement with PADEP, all ICI Americas SWMUs retained the “USA-“ designation throughout the ownership changes.