

SAAP-047

NITROGUANIDINE AREA 25 SUMPS

SITE DESCRIPTION

The NQ manufacturing facilities are located in the northwest corner of SFAAP. Construction of these facilities began in the late 1970s with limited production during 1981. In August 1984, the plant began bulk production of NQ, and ceased bulk production in August 1992. There are 25 sumps (0.7 acres) in the NQ Area. Each of the production buildings had dedicated sumps outside the buildings which received wastewater generated by operations in the NQ Area. The wastewater resulted from equipment washdowns, spills, runoff, and non-contact operations, such as cooling water and steam condensate. The wastewater may have been acidic and may potentially have contained contaminants such as NQ and GN, as well as raw process materials or intermediates of the NQ process.

RFI results indicate elevated levels of nitrates in groundwater and the soil around the sumps of Bldg 9040. Elevated levels of sodium were also detected.

CLEANUP STRATEGY

A RFI and focused CMS will be completed to confirm contaminant characteristics and evaluate potential remediation options. Remediate all of the 25 sumps (14,800 cy removal and landfarm). 2,500 cy of concrete debris will be disposed of as solid waste.

Five years of LTM will be conducted.



STATUS

REGULATORY: RCRA
RRSE: High
CONTAMINANTS: Metals, Ordnance Compounds
MEDIA OF CONCERN: Soil, Groundwater

PHASES	Start	End
RFA.....	197909	199009
CS.....	199509	199805
RFI/CMS.....	199810	200609
DES	200610	200612
IRA.....	199810	199909
CMI(C).....	200701	200709
LTM.....	200710	201209

RC Expected: 200709

NITROGUANIDINE SUPPORT AREA

SITE DESCRIPTION

The NQ Support Area (6 acres) is located in the north central portion of SFAAP in Buildings 2000 and 2012. The equipment included dryer bays, aboveground storage tanks, and half tanks. This was the location of the pilot-scale production plant known as the NQ Support Equipment (NSE) facility. The NSE facility was constructed during 1977-1980 and was operated periodically as a partial prove-out from May 1979 to June 1984. In August 1984, the main NQ plant began production. The majority of the pilot plant was demolished sometime following shut down; however, Buildings 2000 and 2012 are still present. This site was the location of the former nitrocellulose production facility, used from 1943-1971.

STATUS

REGULATORY: RCRA
RRSE: Low
CONTAMINANTS: Nitrates, Sulfates, NQ, GN
MEDIA OF CONCERN: Soil, Groundwater

PHASES	Start	End
RFA.....	197909	199009
CS.....	199509	199805
RFI/CMS.....	199609	200009
LTM.....	200101	201209

RC: 200009

CLEANUP STRATEGY

RFI results indicate the presence of elevated levels of nitrates, NQ, GN and sulfates in soil and groundwater.

The Army is currently determining lateral extent of the groundwater plume. Seven years of LTM will be conducted.



ROAD SOUTHEAST OF SANITARY LANDFILL

SITE DESCRIPTION

The road just southeast of the Sanitary Landfill is located on ~6 acres near the central western border of SFAAP. Along the road located just east of the Sanitary Landfill (SAAP-018) is a steep slope, which, upon inspection, revealed the presence of drums, construction rubble and other refuse possibly, underlying the road. The assumption made at the time of discovery was that the road may have been built over the landfill or may be comprised of fill from the landfill to construct the road base.

A geophysical survey indicated the presence of subsurface anomalies south of SAAP-018 that may include metal objects.

During investigation of SAAP-018 in FY05 a track excavator was used to delineate extent of the waste disposal area. No waste was detected in SAAP-049.

CLEANUP STRATEGY

No further action is anticipated at this site.



STATUS

REGULATORY: RCRA

RRSE: Low

CONTAMINANTS: Metals

MEDIA OF CONCERN:
Groundwater

PHASES	Start	End
RFA.....	197909	.....199009
CS.....	199610	.....199805
RFI/CMS.....	200001	.....200509
RC Expected: 200509		

SAAP-050

DISPOSAL SITE EAST OF THE SWMU 1 (CLASSIFICATION YARD)

SITE DESCRIPTION

SAAP-50 consists of two areas. The first area (50 north) is an abandoned dump site (6.5 acres) that was discovered just inside the eastern boundary of SFAAP near Kill Creek. The second area (50 south) consists of another abandoned dump site (3.2 acres) near the other area. The debris scattered about both sites included shingles, drums and metal slag. An interim removal was accomplished in FY97. Additional debris was removed and rip-rap was placed over select areas to stabilize the bank in FY00.

In FY04, limited debris removal and cover stabilization was conducted on an exposed disposal area in the north disposal site.

CLEANUP STRATEGY

Thirty years of cover maintenance will continue.



STATUS

REGULATORY: RCRA

RRSE: High

CONTAMINANTS: Metals, Solvents

MEDIA OF CONCERN: Soil,
Groundwater

PHASES	Start	End
RFA.....	197909	199009
RFI/CMS.....	199910	200105
IRA.....	200010	200105
LTM.....	200106	203509

RC: 200105

SAAP-051

NEW RECLAMATION YARD

SITE DESCRIPTION

The New Reclamation Yard is located on ~8 acres in the north central portion of SFAAP and includes the Battery Handling Area. The New Reclamation Yard was used to stage scrap materials and excess equipment. Scrap was decontaminated to 5X standards at SAAP-021 prior to sale or reclamation. In the battery handling area, battery parts were observed on the ground. Wastes typically associated with batteries include acids and metals, particularly mercury, lead and/or cadmium, depending upon the type of battery.

Initial samples collected in the battery handling area were found to be unreliable; therefore, the site must be re-sampled. As a result of the EBS, this site was expanded from just the Battery Handling Area to include the entire Reclamation Yard. Additional samples were collected to characterize the entire Reclamation Yard in FY05.

STATUS

REGULATORY: RCRA

RRSE: Medium

CONTAMINANTS: Lead

MEDIA OF CONCERN: Soil

PHASES	Start	End
RFA.....	197909	199009
CS.....	199408	199805
RFI/CMS.....	200001	200712
DES.....	200801	200803
CMI(C).....	200801	200809

RC Expected: 200809

CLEANUP STRATEGY

The RFI report will be finalized and a CMS will be completed. Approximately 3,200 cy of metals-contaminated soil will be excavated, treated and disposed. Confirmatory sampling will be conducted.



SAAP-052 PAINT BAY BUILDING 542

SITE DESCRIPTION

Building 542 (0.4 acres) is located in the north central portion of SFAAP. A paint bay, located within the building, was used to repaint vehicles. Fumes and overspray were vented through the side of the building where stressed vegetation has been observed. Wastes typically associated with paint bays include volatile organics and metals such as chromium, cadmium and lead.

Initial samples were found to be unreliable; therefore the site was re-sampled in 2003. The preliminary results indicated no contamination above regulatory levels for unrestricted use.

CLEANUP STRATEGY

A clean closure certificate will be completed.

STATUS

REGULATORY: RCRA

RRSE: Medium

CONTAMINANTS: Metals, VOCs

MEDIA OF CONCERN: Soil

PHASES	Start	End
RFA.....	197909	199201
CS.....	199201	199805
RFI/CMS.....	199602	200409

RC: 200409

BURN AND DEBRIS AREA NORTH OF STP

SITE DESCRIPTION

The Burn and Debris Area North of STP (Sewage Treatment Plant) is located on ~5 acre in the northeast portion of SFAAP. A sequence of aerial photographs taken of SFAAP beginning in 1941 and ending in 1991 show the old Burn and Debris Area. An inspection was done on September 18, 1997. A wood pile is still there, but the road is covered over with vegetation. The debris begins around the fence line near the main road by the sewage treatment plant. It is comprised of construction debris including heavy duty concrete rubble, rusted out 55-gallon steel drums, glass rubble, broken insulators, pipe debris, wood scraps, telephone poles, wire fencing, concrete pipe pieces, iron scraps and asbestos materials. The debris covers ~1 acre and extends from the fence line, following the creek until reaching the open area where a quarry existed. Debris is on both sides of the creek and in the creek bed itself.

RFI funded in FY04.

CLEANUP STRATEGY

Complete the RFI in FY05. A CMS will be conducted. Soil/debris removal and treatment (~500 cy) may be needed. Five years of LTM will be conducted.



STATUS

REGULATORY: RCRA
RRSE: High
CONTAMINANTS: Metals, PAHs
MEDIA OF CONCERN: Soil, Groundwater, Surface Water

PHASES	Start	End
RFA.....	199601	199604
CS.....	199704	199811
RFI/CMS.....	200310	200609
DES.....	200610	200612
CMI(C).....	200701	200709
LTM.....	200710	201209

RC Expected: 200709

SAAP-054

FLUORESCENT TUBE WELLS

SITE DESCRIPTION

SAAP-054 is three homestead wells used for disposal of Fluorescent tubes (totaling less than 1 acre). One well is located in the northwestern portion of SFAAP, east of the NQ production area. A second well is located in the northeastern portion of SFAAP, southeast of building 211. The third well is located in the east central portion of SFAAP, south of the Ballistics Area. The sites consisted of hand dug water wells that were part of old pre-SFAAP homesteads. One of the wells was five feet in diameter, about twelve feet deep and lined with concrete. This well was used as a fluorescent tube disposal pit. It is uncertain when this occurred, but is suspected to have taken place prior to 1976. The well was uncovered and full of water. Fluorescent tubes contain mercury.

STATUS

REGULATORY: RCRA

RRSE: Medium

CONTAMINANTS: Mercury

MEDIA OF CONCERN:
Groundwater

PHASES	Start	End
RFA.....	199601	199604
CS.....	199704	199811
RFI/CMS.....	200310	200809

RC Expected: 200809

An additional two wells were identified as being used for fluorescent tube disposal. The broken fluorescent tubes and contaminated soil were removed from all three wells.

This site includes the well identified in the Environmental Baseline Survey (EBS) prepared for the Army by Aguirre Engineers, dated October 1998, as being located in Parcel 1-7(4)HR. All three wells were closed in accordance with KDHE well abandonment requirements in 1994.

CLEANUP STRATEGY

Install monitoring wells and sample to verify that the contents of the three wells did not have an adverse impact to groundwater.



SAAP-055

OLD ADMINISTRATIVE BUILDINGS

SITE DESCRIPTION

Not in AEDB-R.

The Old Administrative Buildings are located in the northeast portion of SFAAP. SWMU 55 is soil with potential lead-based paint contamination next to the Old Administration Buildings. This SWMU is located in Parcel 1-1(1) shown in the EBS.

Flaking lead-based paint is not ER,A-eligible. Lead contamination will be addressed if the buildings are demolished by the future land owner.

STATUS

REGULATORY: RCRA

CONTAMINANTS: Lead

MEDIA OF CONCERN: Soil

(MONITORING) WELL SOUTH OF FACILITY 211

SITE DESCRIPTION

The Monitoring Well South of Facility 211 is located in the northeast portion of SFAAP. SWMU 56 is the area of nitrate/nitrite contamination in the area south of Facility 211. Contamination has been documented in the monitoring well in this area. This SWMU is located in Parcel 1-25(7)HR(P) shown in the EBS. Groundwater and soils were sampled by USACHPPM in March 2003. None of the soil results exceeded USEPA Region IX PRGs. No contamination was detected in the groundwater.

CLEANUP STRATEGY

USACHPPM’s March 2003 RRSE Report recommended no further action at this site. However, KDHE wrote letter recommending the Army conduct additional sampling, specifically two years of semi-annual groundwater monitoring for nitrates. SI phase will be re-opened to take additional samples.

STATUS

REGULATORY: RCRA

RRSE: Low

CONTAMINANTS: Nitrate, Nitrite

MEDIA OF CONCERN: Soil

PHASES	Start	End
RFA.....	199808	200303
CS.....	200303	200809

RC Expected: 200809

CHEMICAL PREPARATION HOUSE

SITE DESCRIPTION

The Chemical Preparation House (Facility 507-2) is located in the north central portion of SFAAP. Chemicals may have been spilled on the ground outside of this building. This SWMU is located in Parcel 1-27(7)HR(P) as shown in the EBS.

Soil samples were collected by USACHPPM in March 2003. None of the samples exceeded background levels.

CLEANUP STRATEGY

USACHPPM's March 2003 RRSE Report recommended no further action at this site. However, KDHE wrote letter recommending the Army conduct additional soil and groundwater sampling. The SI phase will be re-opened to take additional samples.

STATUS

REGULATORY: RCRA

RRSE: Low

CONTAMINANTS: SVOC

MEDIA OF CONCERN: Soil

PHASES	Start	End
RFA.....	199808	.....200303
CS.....	200303	.....200809

RC Expected: 200809

SAAP-058 COMBINED SHOPS AREA

SITE DESCRIPTION

The Combined Shops Area (24 acres) is located in the north central portion of the plant, and was used for maintenance activities and repairs. There are a total of 30 facilities in the area. The facilities include: three offices, the fuel oil unloading station, storage and distribution center, 12 storehouses, and nine shops. There was a Tram Repair Shop that was converted into a Heating Plant (Formerly Facility 522, Currently Facility 154-5). Several facilities in the Shop Area are visibly stained. This site is located in Parcel 1-28(7)HR(P) shown in the EBS.

Groundwater and soils were sampled by USACHPPM in March 2003. PCE results in the groundwater exceeded the USEPA Region IX PRGs. PCE, PAHs, lead, arsenic and manganese results from soil exceeded the USEPA Region IX PRGs.

STATUS

REGULATORY: RCRA
RRSE: High
CONTAMINANTS: PAHs, Metals, VOCs
MEDIA OF CONCERN: Soil, Groundwater

PHASES	Start	End
RFA.....	199808	200303
CS.....	199808	200303
RFI/CMS.....	200303	200609
DES	200610	200612
CMI(C).....	200701	200709
LTM.....	200710	201009

RC Expected: 200709

CLEANUP STRATEGY

Perform RFI to define areas requiring excavation of contaminated soil. CMS will be completed. Excavate, treat, and dispose of 400 cy of contaminated soil. Three years of LTM will be conducted after soil removal.



SAAP-059 LAUNDRY FACILITY

SITE DESCRIPTION

The Laundry Facility (Facility 4562) is located in the north central portion of the plant. This facility was used to launder worker clothing to remove process wastes and propellant contamination. The Laundry Shop was a single story facility with a concrete floor containing several sumps and drains. There were two fuel oil tanks located outside of the facility. This SWMU is located in Parcel 1-30(7)HR(P) shown in the EBS.

Soil sampling was conducted by USACHPPM in March 2003. All results of the soil sampling were below USEPA Region IX PRGs.

CLEANUP STRATEGY

USACHPPM's March 2003 RRSE Report recommended no further action at this site. However, KDHE wrote letter recommending the Army conduct additional soil and groundwater sampling. SI phase will be re-opened to take additional samples.

STATUS

REGULATORY: RCRA

RRSE: Low

CONTAMINANTS: VOCs

MEDIA OF CONCERN: Soil

PHASES	Start	End
RFA.....	199808	.....200303
CS.....	200303	.....200809

RC Expected: 200809

OLD PHOTOGRAPHIC LABORATORY

SITE DESCRIPTION

The Old Photographic Laboratory (3 acre site) is in the southeast corner of the Old Administration Building No. 2 (Facility 214), which is located in the northeast portion of SFAAP. Wastes from the laboratory were commonly dumped into the sink, which discharged directly to soils behind the facility. Cleanup inside the building was handled outside of ER,A. This site is located in Parcel 1-31(7)HR(P).

Soil was sampled by USACHPPM in March 2003. SVOCs and arsenic results exceeded the USEPA Region IX PRGs.

CLEANUP STRATEGY

Finalize RFI in FY05. CMS will be completed.
Excavate, treat, and dispose of 75 cy of contaminated soil from outside of the building.



STATUS

REGULATORY: RCRA

RRSE: Medium

CONTAMINANTS: SVOCs, Arsenic

MEDIA OF CONCERN: Soil

PHASES	Start	End
RFA.....	199808	200303
CS.....	199808	200303
RFI/CMS.....	200303	200805
DES	200806	200809
CMI(C).....	200810	200909

RC Expected: 200909

ENVIRONMENTAL LABORATORY (FACILITY 232)

SITE DESCRIPTION

This is not in AEDB-R or AEDB-CC.

The Environmental Laboratory (Facility 232) is located in the north central portion of the plant. The Environmental Laboratory was built in 1982 and contains sumps and drains. Past waste disposal practices are not documented. This SWMU is located in Parcel 1-32(7)HR(P) shown in the EBS. This was an active lab until Jan 2003. It is not ER,A eligible.

Sampling (non-ER,A funded) inside and around building indicated no contamination above action levels. Therefore no further action is expected.

STATUS

REGULATORY: RCRA

RRSE: NE

CONTAMINANTS: None

MEDIA OF CONCERN: None

<u>PHASES</u>	<u>Start</u>	<u>End</u>
RC:		

SAAP-062

TRANSFORMER STORAGE WAREHOUSE (FACILITY 566-5)

SITE DESCRIPTION

The Transformer Storage Warehouse (Facility 566-5) is located in the north central portion of the plant. At the time of the EBS, this facility stored 149 replacement transformers. All of these transformers were removed off-site in FY03. Based on visual inspections, several stains were observed on the concrete floor, and some of the transformers stored in the facility were observed to be leaking. The facility is considered a potential area of concern. All of the transformers stored were tested for PCB content and were below 50 ppm; however, labels were lacking on most of the transformers. It was impossible to determine if all the stains noted were caused by the transformers stored at that time or by transformers previously stored at the facility. Cleanup and disposal of the transformers and building was administered outside the authority of ER,A. This SWMU is located in Parcel 1-34(7)HR(P)/PR(P) shown in the EBS. This site was remediated in 2004 (Non-ER,A funds) and no further action is expected.

STATUS

REGULATORY: RCRA

RRSE: Low

CONTAMINANTS: PCB

MEDIA OF CONCERN: Soil

PHASES	Start	End
RFA.....	199808	200303
CS.....	199808	200303
RC: 200303		

SAAP-063 WATER TOWERS

SITE DESCRIPTION

The Water Towers (7 acres total) are located throughout the plant. There are 8 water towers consisting of the north towers #'s 1, 2, 3 and 4 and the south towers #'s 5, 6, 7 and 8. The surface soil surrounding the Water Towers are contaminated with lead, originating from lead-based paint. The towers were painted several times before 1978, and sandblasted each time before they were repainted. Documentation was available to confirm that no measures were taken to contain the removed paint during or after sandblasting operations.

Soil samples were collected by USACHPPM in March 2003. Arsenic and lead results exceeded USEPA Region IX PRGs.

Two other water towers located in the NC Production Area will be remediated under SAAP-116 (AOC 16).

CLEANUP STRATEGY

Perform RFI to define areas requiring excavation of contaminated soil. Excavate, treat, and dispose of ~5,000 cy of contaminated soil.



STATUS

REGULATORY: RCRA

RRSE: Low

CONTAMINANTS: Metals

MEDIA OF CONCERN: Soil

PHASES	Start	End
RFA.....	199808	200303
CS.....	199808	200303
RFI/CMS.....	200303	200805
DES.....	200806	200807
CMI(C).....	200808	200906

RC Expected: 200906

SAAP-064

PAPER BURNING GROUND

SITE DESCRIPTION

The Paper Burning Ground (3 acres) is located in the east central portion of the plant. A trench was observed on aerial photographs encompassing 200 X 30 feet. Contaminants may have extended to a depth of 5 feet below ground surface. This SWMU is located in Parcel 1-38(7)HR(P) shown in the EBS.

Soil samples were collected by USACHPPM in March 2003. Arsenic results in soil exceeded the USEPA Region IX PRGs. The soil results were used to estimate the potential levels of compounds in groundwater. Arsenic, chromium and lead are estimated for groundwater as exceeding the USEPA Region IX PRGs.

CLEANUP STRATEGY

Perform RFI to define areas requiring excavation of contaminated soil. One well will be installed as part of the RFI. Excavate and dispose of ~1,600 cy of contaminated soil. Five years of LTM will be conducted.



STATUS

REGULATORY: RCRA
RRSE: Low
CONTAMINANTS: Metals
MEDIA OF CONCERN: Soil, Groundwater

PHASES	Start	End
RFA.....	199808	200303
CS.....	199808	200303
RFI/CMS.....	200303	200805
DES.....	200806	200809
CMI(C).....	200810	200909
LTM.....	200910	201409
RC Expected: 200909		

SAAP-065 TANK FARM

SITE DESCRIPTION

The Tank Farm site (~22 acres) is located in the north central portion of the plant, Parcel 8-2(7)HR(P) as shown in the EBS. The tank farm received and processed recycled solvents which included alcohol, ether, and acetone. Numerous releases have been documented from within the Tank Farm. Although the tanks were removed, the foundations and saddles remain. This site has not been used since the 1960s.

Groundwater and soil samples were collected by USACHPPM in March 2003. Arsenic and lead results for groundwater exceeded the USEPA Region IX PRGs. Arsenic and benzo(a)pyrene results for soil exceeded the USEPA Region IX PRGs.

CLEANUP STRATEGY

Perform RFI to define areas requiring excavation of contaminated soil. Excavate and dispose of 4,100 cy of contaminated soil. Five years of LTM will be conducted.



STATUS

REGULATORY: RCRA
RRSE: Low
CONTAMINANTS: PAH, Metals
MEDIA OF CONCERN: Soil, Groundwater

PHASES	Start	End
RFA.....	199808	.....200303
CS.....	199808	.....200303
RFI/CMS.....	200303	.....200805
DES.....	200806	.....200807
CMI(C).....	200808	.....200909
LTM.....	200910	.....201409
RC Expected: 200909		

INSTALLATION –WIDE STREAM STUDY

SITE DESCRIPTION

In Feb 2000, USEPA ordered SFAAP to conduct stream monitoring. This site will be designated for sampling the installation-wide streams of Captain (10,861 linear feet), Hanson (6,900 linear feet), Kill (9,097 linear feet), and Spoon (18,506 linear feet) Creeks. Initial stream surface water and sediment sampling was conducted under SAAP-014, except for Hanson Creek, which was conducted under SAAP-002.

Phase I of the stream sampling was completed in 2003. Phase I included sediment and surface sampling. Sediment sample contaminants above KDHE RSK residential soil to groundwater pathway values were arsenic, nitrocellulose and TPH-DRO. Surface water sample contaminants above KDHE RSK residential groundwater pathway values were manganese, dieldrin, di-n-octyl phthalate and lead.

Phase II is completed, which included surface water sampling only.

CLEANUP STRATEGY

Phase III includes surface water sampling to characterize changes over time. This sampling is planned for FY05. The RFI will be completed. Soil removal may be needed.

STATUS

REGULATORY: RCRA
RRSE: High
CONTAMINANTS: Metals, TPH
MEDIA OF CONCERN: Surface Water, Sediment

PHASES	Start	End
RFA.....	199808	200303
CS.....	199808	200303
RFI/CMS.....	200303	200510
DES.....	200511	200512
CMI(C).....	200601	200609

RC Expected: 200609

SAAP-067 SOUTH ACID AREA

SITE DESCRIPTION

The South Acid Area (26 acres) is located in the east central portion of SFAAP, and consists of tanks, troughs, pipes and other conveyances. The plant manufactured and regenerated nitric and sulfuric acids. This area was used from 1943 to 1998. This site includes the areas identified as AOC 7-Former Truck Maintenance Shop in South Acid Area, AOC 8-Former Fuel Oil Storage Tank in South Acid Area, and AOC 9-Oil and Paint House in South Acid Area. The ditches from the South Acid Area to Pyotts Pond are included in SAAP-039.

Groundwater and soil samples were collected by USACHPPM in March 2003. None of the groundwater results exceeded USEPA Region IX residential PRGs. Benzo(a)pyrene, lead and arsenic results in soil exceeded the USEPA Region IX PRGs.

CLEANUP STRATEGY

Perform RFI to define areas requiring excavation of contaminated soil. Excavate, treat, and dispose of ~15,600 cy of contaminated soil. Five years of LTM will be conducted.



STATUS

REGULATORY: RCRA
RRSE: Medium
CONTAMINANTS: Nitrates, Sulfates, Metals, SVOCs, PAHs, TPH
MEDIA OF CONCERN: Soil, Groundwater

PHASES	Start	End
RFA.....	199808	200303
CS.....	199808	200303
RFI/CMS.....	200303	200805
DES	200806	200807
CMI(C).....	200808	200906
LTM.....	200907	201309

RC Expected: 200906

SAAP-101

MONITORING WELL WEST OF OLD ADMIN AREA

SITE DESCRIPTION

The Monitoring Well West (32 acre site) of the Old Administration Area is located in the northeast portion of SFAAP. AOC 1 is the area of nitrate/nitrite groundwater contamination west of the Old Administration Area. Contamination has been documented in a monitoring well in this area. This AOC is located in Parcel 1-26(7)HR(P) shown in the EBS.

The Army funded sampling in 2003 for nitrates in groundwater and found detections right at the action level. Currently, the source of the nitrates is unknown.

CLEANUP STRATEGY

Three years of LTM will be conducted.



STATUS

REGULATORY: RCRA

RRSE: Medium

CONTAMINANTS: Nitrates

MEDIA OF CONCERN:
Groundwater

PHASES	Start	End
RFA.....	199808	200303
CS.....	199808	200303
RFI/CMS.....	200304	200409
LTM.....	200410	200809

RC: 200410

SAAP-102

MAIN ELECTRICAL SWITCH YARD

SITE DESCRIPTION

The Main Electrical Switch Yard (Facility 154-4) is located in the center of the plant. Based on interviews with former employees, a transformer fire resulting from a lightning strike occurred around 1945. The majority of the transformers (assumed to contain PCBs based on the time period) were said to have been destroyed by the fire. This site was active until 2003. This AOC is located in Parcel 1-29(7)HR(P) shown in the EBS. The transformers were removed in 2003. This site was remediated in 2004 with non-ER,A funds. Therefore, no further action is expected.

STATUS

REGULATORY: RCRA

RRSE: Low

CONTAMINANTS: None

MEDIA OF CONCERN: Soil

<u>PHASES</u>	<u>Start</u>	<u>End</u>
RFA.....	199808	200303
CS.....	199808	200303
RC: 200303		

SAAP-103

NEW PHOTOGRAPHIC LABORATORY

SITE DESCRIPTION

This site is not in AEDB-R or AEDB-CC.

The new Photographic Laboratory (Facility 227-18) (0.2 acres) is located in the north central portion of the plant and operated between 1990 and 1998. Based upon interviews, a common waste disposal practice in the photography laboratories was to dispose of the wastes in the sinks. The location of the sink drain outfall has been identified. Because this facility was active after 1986, it is not eligible for remedial action under ER,A. This AOC is located in Parcel 1-33(7)HR(P) shown in the EBS. In 2004, this site was investigated with non-ER,A funds. No contaminants were found above action levels. No further action is anticipated at this site.

STATUS

REGULATORY: RCRA

RRSE: NE

CONTAMINANTS:

MEDIA OF CONCERN:

PHASES	Start	End
RC:		

SAAP-104

DISPOSAL AREA SOUTHEAST OF STP

SITE DESCRIPTION

The Disposal Area (0.3 acres) Southwest of the STP (Sewage Treatment Plant) is located in the northeast portion of SFAAP. This AOC is the area southwest of the STP where several trenches were noted on historical aerial photographs. This area may have been the Mess Hall Landfill. This AOC is located in Parcel 1-37(7)HR(P) shown in the EBS.

Sampling by USACHPPM in March 2003 identified arsenic in the subsurface soil and surface soil as exceeding USEPA Region IX PRG screening levels. However, the detections were below background levels. USACHPPM's March 2003 RRSE Report recommends no further action at this site. However, KDHE wrote letter recommending the Army conduct additional soil and groundwater sampling.

STATUS

REGULATORY: RCRA

RRSE: Low

CONTAMINANTS: Metals

MEDIA OF CONCERN: Soil

PHASES	Start	End
RFA.....	199808	200303
CS.....	199808	200809

RC Expected: 200809

CLEANUP STRATEGY

The SI phase will be re-opened in AEDB-R in spring 2005. Additional soil and groundwater samples will be taken. Back hoe trenching will be conducted for two days.

CANNON RANGE TUNNELS (FACILITY 303)

SITE DESCRIPTION

The Cannon Range Tunnels are located in the eastern portion of SFAAP. The Army fired 2.75 inch inert rockets into these tunnels at this site. During the 1998 EBS site investigation of the Cannon Range Tunnels (Facility 303), it was noted that 32, 55-gallon drums were stored within the southern tunnel. It was later determined that these drums contained investigation-derived waste. Iron piping material, commonly used for explosive reactivity testing, was observed in the drums. The greatest potential for surface soil contamination was anticipated to be along the firing line leading from the platforms to the tunnels and within the tunnels. During a 1988 RI field program conducted at the Cannon Range, six surface soil samples were collected downrange of the firing line and a composite sample was collected from each tunnel. Samples were analyzed for priority pollutant metals, explosives, and TCLP. Analytical results indicate that explosives and metals were present in the soil at low levels. This AOC is located in Parcel 2-11(7)HR(P) shown in the EBS.

All drums located in the Cannon Range Tunnels were disposed off-site. During USACHPPM's March 2003 RRSE sampling, arsenic was the only compound exceeding the USEPA Region IX PRG value, but below background level.

USACHPPM's March 2003 RRSE Report recommends no further action at this site. However, KDHE wrote letter recommending the Army conduct additional soil samples.

CLEANUP STRATEGY

The SI phase will be re-opened in AEDB-R in spring 2005. Additional soil samples will be taken.

STATUS

REGULATORY: RCRA

RRSE: Low

CONTAMINANTS: Metals, Explosives

MEDIA OF CONCERN: Soil

PHASES	Start	End
RFA.....	199808	200303
CS.....	199808	200809

RC Expected: 200809

(35) PROCESS FACILITIES WITHIN F-LINE AREA

SITE DESCRIPTION

Thirty-five process facilities (89 acres) located to the west of the Press Houses in the F-Line Area, in the east central portion of the plant. AOC 6 is located in Parcel 2-18(7)HR(P) shown in the EBS. This parcel has been delineated to include each of the following facilities D120-7, F120-4, F120-8, 181-3, 563, 5815-1, 5815-2, 5815-3, 5816-2, 5822, 5823, 5837, 5850, 5861, 7803-1, 7803-2, 7803-3, 7803-4, 7814, 7815-1, 7816-1, 7816-2, 7816-3, 7826, 7827, 7828, 7832, 7866, 7868-1, 7868-2, 7868-3, 7868-4, 7871-2, 7897, and 7898. This site was handled under SAAP-010.

STATUS

REGULATORY: RCRA

RRSE: Medium

CONTAMINANTS: Lead, Explosives, SVOCs, POL

MEDIA OF CONCERN: Soil

PHASES	Start	End
RFA.....	199808	200303
CS.....	199808	200303

RC: 200303

SAAP-107 THRU 109

SITE DESCRIPTION

AOC 7: Former Truck Maintenance Shop in South Acid Area consists of the area where a methylene chloride release was detected in the South Acid Area next to the Former Truck Maintenance Shop. This AOC is located in Parcel 3-4(3)HR shown in the EBS.

AOC 8: Former Fuel Oil Storage Tank in South Acid Area consists of the area where a chloroform release was detected in the South Acid Area next to the Former Fuel Oil Storage Tank. This AOC is located in Parcel 3-5(3)HR shown in the EBS.

AOC 9: Oil and Paint House in South Acid Area consists of the area where a methylene chloride release was detected in the South Acid Area next to the Oil and Paint House. This AOC is located in Parcel 3-6(3)HR shown in the EBS.

These sites are consolidated under SAAP-067.

STATUS

REGULATORY: RCRA

RRSE: Low

CONTAMINANTS: VOCs, SVOCs, POL

MEDIA OF CONCERN: Soil

PHASES	Start	End
RFA.....	199808	200303
CS.....	199808	200303

RC: 200303

SAAP-110

STORAGE MAGAZINES NOT PART OF SWMUs

15&16

SITE DESCRIPTION

The 80 storage magazines (~541 acres) not included in SAAPs (SWMUs) 15 and 16, are on the southern end of the plant. These magazines were used to store processed powder and propellants. This AOC is located in Parcel 4-1(1) shown in the EBS.

During USACHPPM's 2003 RRSE sampling event, arsenic was the only compound to exceed its respective Region IX PRG value, but was below background level. Pesticide residues (assumed to be from proper application) below the floors exceed residential risk levels.

CLEANUP STRATEGY

Additional samples will be taken to better delineate the contamination levels.



STATUS

REGULATORY: RCRA

RRSE: Low

CONTAMINANTS: Metals, Pesticides, Explosives, SVOCs

MEDIA OF CONCERN: Soil

PHASES	Start	End
RFA.....	199808	200303
CS.....	199808	200303
RFI/CMS.....	200303	200809

RC Expected: 200809

SAAP-111

FORCED AIR DRYERS (AND REST, SCREEN AND CAN PACK HOUSES)

SITE DESCRIPTION

SAAP-111 consists of over 50 buildings designated as Forced Air Dryers, Rest Houses, Screen Houses, and Can Pack Houses in Parcel 5-10(7)HR shown in the EBS. Located in the west section of the plant, this area processed both solvent propellant.

This site was sampled by USACHPPM in 2003 for SVOCs, nitrates, and heavy metals. Arsenic was the only compound to exceed the USEPA Region IX PRG value and local background.

USACHPPM's March 2003 RRSE Report recommends no further action for this site. However, KDHE wrote letter recommending the Army conduct additional soil and groundwater samples.

CLEANUP STRATEGY

The SI phase will be re-opened in AEDB-R in spring 2005. Additional soil samples will be taken.

STATUS

REGULATORY: RCRA

RRSE: Low

CONTAMINANTS: Metals, Explosives, SVOCs

MEDIA OF CONCERN: Soil

PHASES	Start	End
RFA.....	199808	.....200303
CS.....	199808	.....200809

RC Expected: 200809

SAAP-112 PASTE AIR DRY FACILITIES

SITE DESCRIPTION

SAAP-112 consists of the former Paste Air Dry facilities in Parcel 5-13(7)HR(P) shown in the EBS. Located in the center of the facility, this site consists of 16 buildings (36 acres) used as paste drying facilities that were part of the N-line operations. All of the buildings have been burnt with only foundations remaining.

The RRSE sampling conducted by USACHPPM in March 2003 analyzed for metals, SVOCs, NC, and NG. Arsenic and lead exceeded the USEPA Region IX PRG value.

CLEANUP STRATEGY

Additional samples will be taken to better delineate the contamination.



STATUS

REGULATORY: RCRA

RRSE: Low

CONTAMINANTS: Metals, Explosives, SVOCs, NC, NG

MEDIA OF CONCERN: Soil

PHASES	Start	End
RFA.....	199808	200303
CS.....	199808	200303
RFI/CMS.....	200303	200809

RC Expected: 200809

SAAP-113

GENERAL WAREHOUSES (8037 SERIES)

SITE DESCRIPTION

This site is not AEDB-R or AEBD-CC.

The 8037 series warehouses consist of eight large warehouses that have been listed as containing such items as unused NQ drums (pre-NQ packaging) storage, acid plant parts and supplies, and 3X contaminated equipment interim storage. The 8037 series warehouses are located in Parcel 5-14(7)HR(P) shown in the EBS. The parcel delineation includes the warehouse buildings and adjacent railroad/loading dock areas. In FY04 & FY05, an investigation and cleanup of this site was conducted with non-ER,A funds.

No further action is anticipated.

STATUS

REGULATORY: RCRA

RRSE:

CONTAMINANTS:

MEDIA OF CONCERN:

<u>PHASES</u>	<u>Start</u>	<u>End</u>
RC:		

SAAP-114 ROBERT'S LAKE

SITE DESCRIPTION

Robert's Lake (12 acres) is located in the west central portion of SFAAP, south of the Old Sanitary Landfill and west (downgradient) of the G-line ditches. Robert's Lake current and future use is for recreation. This AOC is located in Parcel 6-7(7)HR(P) shown in the EBS.

This site was sampled by USAEHA in 1994 and was sampled for SVOCs, metals and explosives. Arsenic and lead were the only compounds in surface water to exceed USEPA Region IX PRGs. Arsenic in sediment exceeded USEPA Region IX PRGs. USACHPPM performed a Relative Risk Site Evaluation using the 1994 data and recommended further action on this site.

CLEANUP STRATEGY

Perform an RFI to delineate sediments requiring excavation. CMS will be completed. Excavate and dispose of ~17,000 cy of contaminated sediment. Restore pond by fixing the dam once excavation is complete.



STATUS

REGULATORY: RCRA
RRSE: High
CONTAMINANTS: Metals
MEDIA OF CONCERN: Surface Water and Sediment

PHASES	Start	End
RFA.....	199808	.....200303
CS.....	199808	.....200303
RFI/CMS.....	200303	.....200609
DES.....	200610	.....200612
CMI(C).....	200701	.....200809

RC Expected: 200809

SAAP-115

HAZARDOUS ANALYSIS TESTING LAB

SITE DESCRIPTION

The Hazardous Analysis Testing Laboratory (1 acre) is located in the north central portion of the plant. This area consists of an indoor firing range which used sand to catch expended small-caliber test projectiles. Some of the sand was disposed in piles just outside a door on the south side of the building and a door on the north side of the building. Both sand piles measure 60 X 30 feet. This AOC is located in Parcel 7-2(5)HR shown in the EBS.

During 2003, the site was sampled by USACHPPM. Lead and arsenic in soil were the only contaminants to exceed Region IX PRGs.

CLEANUP STRATEGY

Complete Interim Removal Action of 77 cy of soil. Excavate, treat, and dispose of soil off-site. Perform confirmation sampling and restoration of area.

STATUS

REGULATORY: RCRA

RRSE: Medium

CONTAMINANTS: Metals

MEDIA OF CONCERN: Soil

PHASES	Start	End
RFA.....	199808	200303
CS.....	199808	200303
RFI/CMS.....	200303	200709
IRA.....	200610	200709
RC Expected: 200709		

NITROCELLULOSE PRODUCTION LINES

SITE DESCRIPTION

The former Nitrocellulose (NC) production lines (107 acres) were located in the north central portion of the plant. Each production line is approximately 10 acres in size and contains 10 or more buildings. The majority of the buildings have been burnt and all that remains are the concrete foundations. The NC Production Lines produced NC during the periods of 1943-1960, and 1965-1971. Nitrocellulose and other hazardous constituents were released to the soil and potentially the groundwater in the proximity of the production facilities. This AOC is located in Parcel 8-2(7)HR(P) shown in the EBS.

During 2003, the site was sampled by USACHPPM. Arsenic, lead and SVOCs were detected in soil above the USEPA Region IX PRGs.

CLEANUP STRATEGY

Complete RFI to verify quantities outside of foundations. Perform remedial design for soil removal and disposal. Perform remedial action to excavate and dispose of ~13,880 cy of soil off-site. Sample and restore excavated area.



STATUS

REGULATORY: RCRA

RRSE: Medium

CONTAMINANTS: Lead, NC, NG, SVOC, VOCs, Sulfates, Nitrates

MEDIA OF CONCERN: Soil

PHASES	Start	End
RFA.....	199808	200303
CS.....	199808	200303
RFI/CMS.....	200303	200705
DES	200806	200807
CMI(C).....	200808	200906

RC Expected: 200906

NITROQUANIDINE PRODUCTION BUILDINGS

SITE DESCRIPTION

SAAP 17 includes all buildings which have been identified as being potentially contaminated with explosives located in Parcel 9-5(6)HR shown in the EBS. The NQ Production Facilities are located in the northwest portion of SFAAP. Based on a review of the documents, visual inspections and interviews, there is evidence that NQ and GN contamination was observed leaching out of walls and floors during the 1998 EBS visual inspection.

During 2003, the site was sampled by USACHPPM for NQ and nitrates/nitrites with no detections above USEPA Region IX PRG values.

USACHPPM’s March 2003 RRSE Report recommends no further action at this site. Once the buildings are demolished, if contamination is found it will be addressed under SAAP-047. However, KDHE wrote letter recommending the Army conduct additional soil samples.

CLEANUP STRATEGY

The CS phase will be re-opened in AEDB-R in spring 2005. Additional soil samples will be taken.

STATUS

REGULATORY: RCRA

RRSE: Low

CONTAMINANTS: NQ, GN, Nitrates, Sulfates, SVOCs, VOCs

MEDIA OF CONCERN: Soil

PHASES	Start	End
RFA.....	199808	200303
CS.....	199808	200709

RC Expected: 200709