STATEMENT OF BASIS
March 10, 2022

Former Sunflower Army Ammunition Plant
KDHE Project Code #: C4-046-71058
EPA ID # KS3213820878
Solid Waste Management Unit 55 – Administration Building
DeSoto, Johnson County Kansas

Facility/Unit Type: SFAAP SWMU 55/ Original SFAAP Administration offices
Contaminants: Lead, Asbestos Containing Material (ACM), Pesticides
Affected Media: Surface Soils
Proposed Remedy: Excavation for surface and subsurface soils
No Further Action for site-specific groundwater

INTRODUCTION

This Statement of Basis (SB) describes the proposed corrective measures (remedy) for Solid Waste Management Unit, SWMU 55 – Old Administration Buildings, at the Former Sunflower Army Ammunition Plant (SFAAP) in DeSoto, Kansas. The Kansas Department of Health and Environment’s (KDHE) authority for requiring corrective action at SFAAP is based upon the KDHE Bureau of Remediation (BER) SFAAP Consent Order No. 05-E-0111 and Kansas Hazardous Waste Statutes: K.S.A. 65-3430 et seq., K.S.A. 65-3452a et seq., and K.A.R. 28-31-4 et seq. Environmental response actions at SFAAP comply with the Defense Environmental Restoration Program (10 U.S.C. §2701). The SFAAP is not on the National Priorities List.

The KDHE is issuing this Statement of Basis as part of its public participation responsibilities under the Resource Conservation Resource Act (RCRA). This document highlights the information that is presented in more detail in the facility Administrative Record (AR). The AR information includes: The Final RCRA Facility Investigation Report SWMU 55, Old Administration Buildings (Louis Berger and Burns & McDonnell, 2020) and other documents. The public is encouraged to review these documents for a more complete understanding of the environmental issues at SWMU 55 and the corrective actions that are planned. The AR locations are noted at the end of this document.
PROPOSED REMEDY

The proposed remedy for SWMU 55 is demolition of the existing structures, excavation and off-site disposal for contaminated soils and demolition debris material.

Groundwater beneath SWMU 55 is not a media of consideration for SWMU 55 because the groundwater was addressed during the RFI for SWMU 60, which is located within the footprint of SWMU 55. SWMU 60 indicated that site-specific COCs for groundwater (including lead) were below the TMDLs, as indicated by samples collected from monitoring well 060MW003 (Tetra Tech, 2021).

FACILITY BACKGROUND

The former SFAAP is located near DeSoto, Kansas, in the northwest corner of Johnson County. It is approximately 30 miles southwest of Kansas City, Kansas, and 16 miles east of Lawrence, Kansas. SFAAP includes approximately 9,065 acres and is surrounded primarily by agricultural land. It is bounded on the east by Spoon and Kill Creeks and on the west by Captain Creek (Figure 1). The plant consisted of production facilities, administrative and storage facilities, powerhouses, landfills, lagoons, ditches, burning grounds, sumps, projectile ranges, and waste treatment facilities. Most of the assets of the plant are no longer in active use. The Site produced nitrocellulose, nitroglycerin, and a variety of propellants from 1942-1971, acids, and nitroguanidine from 1971-1992. The plant was declared excess in 1998 by the Army and sold to Sunflower Redevelopment LLC in 2005. The site is composed of 70 Solid Waste Management Units (SWMUs) where a release of hazardous waste was identified and 27 Areas of Concern (AOCs) where hazardous waste or constituents have been identified but are not linked to a specific solid waste management practice.

Summary of site SWMU 55

SWMU 55, Old Administration Buildings, is in the northeast portion of the former SFAAP, encompassing approximately 20.9 acres with the western portion of SWMU 55 bordering the eastern portion AOC 1. Buildings originally located within the SWMU 55 boundary included the Telephone Exchange Building (Building 140), Autodin and ADP Building (Building 141), Administration Building 1 (Building 200), Administration Building 2 (Building 214), Mess Hall (Building 234), and the Area Shop/Former Typewriter Repair (Building 565) (BMcD, 2020). All buildings are still present except for Building 234, which was demolished. Only the foundation walls of Building 234 remain in place (BMcD, 2020).

Contaminants of Concern (COCs) include lead-based paint, asbestos containing material (ACM) and pesticides. Lead-based paint was likely used in the construction of the buildings, as evident by the presence of lead in surface soil samples collected along the perimeters of each building (BMcD, 2020). Detection of lead below TMCLs in samples collected from the surface drainage areas away from the buildings suggest that the transport of lead in the SWMU 55 soils is attenuated. ACM is also present in the building materials. Pesticides are known to have been applied around the SWMU 55 buildings.
The majority of SWMU 60 (Old Photographic Laboratory) is also located within SWMU 55 boundaries, but corrective action is being completed separately from the SWMU 55 activities. SWMU 60 includes the easternmost portion of Building 214 (Administration Building 2) and the surrounding area.

SUMMARY OF FACILITY RISKS

Historical soil sampling activities were conducted as part of the RFI at SWMU 60 (Old Photographic Laboratory) from 2008 to 2010. The majority of SWMU 60 is located within the SWMU 55 boundary (Tetra Tech, 2021). SWMU 60 includes the eastern-most portion of Administration Building 2 and the surrounding area. Soil samples were collected for lead along the outside walls of the east wing of Building 214, from the east, west, and south sides of the ammonia tank building (attached to the south wall of the east wing of Building 214), from the drainage ditch originating from the southeast corner of Building 214, and from the interior subfloor from beneath the photographic laboratory (Tetra Tech, 2021). Detected values were below the Residential TMCL for lead of 400 mg/kg (Tetra Tech, 2021).

As part of the SWMU 55 RCRA Facility Investigation Report, January 2020, a field investigation was conducted to determine if lead concentrations in soils adjacent to SWMU 55 buildings exceed Residential or Non-Residential TMCL criteria (BMcD, 2020). Soil samples were collected from a depth of 0 to 0.5 ft bgs and analyzed for lead (BMcD, 2020). Sample locations included soils from the perimeter of Buildings 140, 141, 200, 214, 234, 565, and the drainage area about three feet from the exterior walls of Buildings 140, 200, 214 and 565 (BMcD, 2020).

Analytical results from the RFI demonstrated that lead was detected in all 143 surface soil samples collected, indicating that SWMU 55 soils were impacted by lead (BMcD, 2020). It is likely that the deterioration of lead-based paint used on the SWMU 55 buildings impacted perimeter soils. There were 19 samples in which lead concentrations exceeded the Residential TMCL for lead of 400 mg/kg (BMcD, 2020). Of these 19 samples, lead concentrations exceeded the Non-Residential TMCL of 1,000 mg/kg in three samples (BMcD, 2020). None of the soil samples collected from the drainage areas exceeded TMCLs for lead.

INTERIM CORRECTIVE MEASURES

No interim corrective measures have been conducted for SWMU 55.

Corrective measures conducted at SWMU 60, which is within the footprint of SWMU 55, included excavation and disposal of impacted materials in Building 214 due to concentrations of arsenic in subfloor soil samples that exceeded TMCLs (Tetra Tech, 2021). Excavation was halted at the northern section of the basement floor once bedrock was encountered at around 2 ft bgs (Shaw, 2005). Post-excavation subfloor confirmation soil sample results indicated that the remaining soils beneath the basement floor were below TMCLs (Shaw, 2005). No contaminant exceeded its TMCL in exterior soil samples (Shaw, 2005).
RISK ASSESSMENT

The Army conducted a streamlined health risk evaluation by comparing RFI data to the approved TMCLs for the site. KDHE believes that proper employment of the KDHE (2021) RSK Manual values result in risk-based remediation that is consistent with federally promulgated standards, including the Safe Drinking Water Act, 42 U.S.C. §300f – 300j-26, and is protective of human health as required by Resource Conservation and Recovery Act, 42 U.S.C. §6901 et seq., including the Hazardous and Solid Waste Amendments (HSWA) and 40 CFR Part 264.101. KDHE Tier 2 risk-based cleanup goals represent concentrations at which the contaminants pose an acceptable human health risk to receptors, including sensitive groups (e.g., children or the elderly), over a lifetime.

Cleanup goals were developed for two general categories of receptors: residents and non-residents, according to the appropriate land-use designation, exposure frequency, and exposure duration. According to the Johnson County Rural Comprehensive Plan Resolution No. 079-98, Conceptual Land Use Plan, Sunflower Army Ammunition Plant. July 23, 1998 the area encompassing SWMU 55 is proposed to be a Business Center, consisting of mixed office, research and development, and technology uses. Based on this land-use, the potential current and future receptors include:

- Current: Construction and excavation workers.
- Future: Construction workers, business center employees and visitors.

The RFI identified lead as a COC at SWMU 55 based on exceedances of the residential soil TMCLs, therefore, the exposure pathway for soil was considered during the assessment (BMcD, 2020). Evaluated exposure pathways include incidental ingestion and inhalation of airborne particulates (dusts). Based on comparison of the RFI results to TMCLs, which identified exceedances and therefore pose a potentially unacceptable health risk, the following corrective action objectives (CAOs) were established for surface soil SWMU 55:

- Mitigate risk to human health via direct contact with impacted surface soil with COC concentrations above TMCLs.
- Mitigate the potential future migration of contaminants from impacted surface soil to surface drainage pathways.

Additional evaluation of groundwater in the area will occur when work on GWOU-#4 is done.

SUMMARY OF ALTERNATIVES

The KDHE has determined the sole proposed remedy alternative includes:

1. ACM abatement/disposal in a KDHE-approved off-site disposal facility
2. Demolition of the building and disposal of building debris at a KDHE-approved off-site disposal facility.
3. Excavation of soil for lead and pesticide contamination with disposal at a KDHE-approved off-site disposal facility.

4. Site restoration.

This proposal is based upon KDHE’s review of all available historical documentation regarding the Site.

Groundwater beneath SWMU 55 is not a media of consideration for SWMU 55 because the groundwater was addressed during the RFI for SWMU 60, which is located within the footprint of SWMU 55. SWMU 60 indicated that site-specific COCs for groundwater (including lead) were below the TMDLs, as indicated by samples collected from monitoring well 060MW003 (Tetra Tech, 2021). Groundwater will be evaluated for area wide contamination when the Army performs the groundwater assessment of groundwater operable unit GWOU-#4.

EVALUATION OF THE PROPOSED REMEDY AND ALTERNATIVES

The KDHE has determined that ACM abatement, demolition of the existing buildings, and excavation of contaminated surface and subsurface soils (ACM, lead and pesticide) is the chosen alternative for the proposed remedy. All demolition materials, ACM and contaminated soils shall be disposed of at KDHE-approved off-site facilities in order to protect human health and the environment at the site. This proposal is based upon KDHE’s review of all available historical documentation regarding the Site.

PUBLIC PARTICIPATION

KDHE solicits input from the community during the RCRA decision-making process to ensure that the community concerns are considered in approving the recommended remedial alternative for SWMU 55. The public is also invited to provide comments on remedial alternatives not addressed in investigation reports. KDHE has set a public comment period from March 11, 2022 to April 11, 2022 to encourage public participation in the remedy selection process. A public meeting is not scheduled at this time. If the public meeting is requested in writing with a statement of issues to be raised, the KDHE may conduct a public meeting virtually or in person to receive both oral and written comments.

After review of any public comments related to the Statement of Basis, KDHE will determine if additional remedy or investigation is necessary. Final determination for completion of the remedy will be documented in an Agency Decision Document and/or No Further Corrective Action Planned Determination letter. Upon final agency approval for closure, KDHE will issue the No Further Action Planned Determination, and the RCRA Permit applicants will request, and KDHE will approve, exclusion of the parcels in SWMU 55 referenced herein from a KDHE Draft RCRA Permit, if not already excluded in EPA permit modifications.
ADMINISTRATIVE RECORD

The administrative record (AR) is available at the following locations:

<table>
<thead>
<tr>
<th>Name/Address</th>
<th>Contact Information</th>
<th>Hours</th>
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<tbody>
<tr>
<td>KDHE</td>
<td>Phone: (785) 296-1673 (main line) or 785-296-8801 (Margaret Townsend, Unit Chief)</td>
<td>Monday - Friday: 8 a.m. - 12 p.m. and 1 p.m. - 4 p.m.</td>
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<tr>
<td>Bureau of Environmental Remediation, Federal Facilities Unit</td>
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<tr>
<td>1000 SW Jackson Street, Suite 410</td>
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<td>Topeka, Kansas 66612</td>
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After the public comment period, KDHE will summarize and respond to all comments received in a Response to Comments document. The Response to Comments document will be incorporated into the AR and a copy will be sent to individuals who provided comments during the public comment period. To send written comments, request a public meeting, or obtain further information, please contact Margaret Townsend, Unit Chief Federal Facilities, at Margaret.Townsend@ks.gov or by phone at 785-296-18801.

In addition, KDHE has established a webpage dedicated to the Site, which is available online during the comment period at: [https://www.kdhe.ks.gov/716/Sunflower-Army-Ammunition-Plant](https://www.kdhe.ks.gov/716/Sunflower-Army-Ammunition-Plant).

FIGURES
Figure 1: SFAAP Facility Map
Figure 2: SWMU 55 Site Location at SFAAP

REFERENCES


Figure 1: SFAAP Facility Map
Figure 2: SWMU 55 Site Location at SFAAP