UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

AMENDMENT #1 to

FINAL REMEDIAL ACTION REPORT

FOR LEGACY SOILS AREA AND

OTHER CONTAMINATED SOILS

AT THE

APACHE POWDER SUPERFUND SITE

Approved by: Date:

ANGELES HERRERA

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1. BACKGROUND

The purpose of this document is to amend the Final Remedial Action Report for Contaminated Soils, signed by EPA Region 9 on September 25, 2008, for the contaminated soils at the Apache Powder Superfund Site ("Site"). After EPA completed the 2008 Final Remedial Action (RA) Report for the cleanup of the contaminated soils located on the Site, new areas of potential contamination were discovered on the Site. This was a result of Apache Nitrogen Products, Inc. (ANPI), the potentially responsible party (PRP), deciding in 2012 to demolish many deteriorated buildings structures or structures along the historic "Powder Line" on the Site. This was an area where explosives had been manufactured beginning in the early 1920s, which posed health and safety hazards due to the degraded state of most of these wooden buildings and structures, many of which were 50 years or older. In July 2017, EPA signed an Explanation of Significant Difference (ESD) #4 to formally identify this area as the Legacy Soils Area and incorporate it into the overall Superfund remedy for the Site. Soils cleanup activities for the Legacy Soils area were conducted during the period of 2012 through 2019. In total, 264 structures were demolished.

The focus of this amendment to the 2008 RA Report is to describe the activities related to the demolition of historic buildings and structures within Legacy Soils Area of the Site during the period of 2012-2020. Four other soils-related demolition debris characterization and removal activities at the Site and one other such removal activity off-Site, where Site debris had been deposited, occurred during this same period. These five activities, listed below, are not summarized in this Amendment but are documented in separate reports and included in the references for context.

1. Time Critical Removal Action - Controlled Burn at Building 51 in 2015;
2. Characterization and Removal of Sulfur Materials and Tanks in 2011-2016;
3. Soil Sampling at Tank 67 in 2016-2017;
4. Sampling and Removal of Demolition Debris from Benson Private Property in 2015-2016; and
5. Decommissioning and characterization of P-03 Perched Zone Tanks and Wastes in 2018-2020.

This Amendment #1 to the 2008 Final Remedial Action Report does not address the soils remedial activities conducted during the period of 1994 (when the Record of Decision was signed) through 2008, as these cleanup activities are thoroughly documented in the 2008 RA Report.

1.1. Site Location and Historic Background

The Site is located seven miles south of the City of Benson, in Cochise County, approximately 50 miles southeast of Tucson, Arizona (Figure 1). ANPI is the current owner and operator of the

Site, referred to as the Apache Powder Superfund Site. Due to recent purchases of additional buffer property along the property boundaries, the ANPI facility currently comprises more than 1,400 acres of property. Historically, the company was a regional supplier of dynamite for the mining industry since 1920. The historic facility also manufactured ammonia, nitroglycerin (NG), ammonium nitrate gel-based explosives, detonating cord, safety fuse and carbon dioxide. Today, ANPI continues to manufacture a variety of ammonium nitrate products used by both the mining and agricultural sectors.

In 2012, ANPI identified an initial list of more than 180 historic structures, including wooden, earth-bunkered manufacturing buildings and sheds, a narrow-gauge railway, dormitory, dining, and laundry facilities along an historic "powder line" on the facility which needed to be removed from the Site. These buildings and structures, which were part of the historic "powder line" infrastructure, were vacant, obsolete and in some cases so deteriorated that they posed a serious health and safety risk to on-site workers or potential visitors/trespassers. Consequently, these structures became known as "legacy structures" and the area where they were located was eventually identified as the "Legacy Soils Area."

Many of the structures were over 50 years in age. At EPA's direction, and to comply with the National Historic Preservation Act (NHPA), ANPI hired a contractor (WestLand Resources) with technical expertise in historic preservation to survey all the structures prior to commencement of the full-scale demolition work. During 2013-2014, WestLand completed the historic preservation survey in three phases and authored the corresponding reports in accordance with the requirements of the Arizona State Historic Preservation Office (SHPO) and the National Historic Preservation Office (NHPO). See detailed reports for more information.

2. CONSTRUCTION ACTIVITIES

The following discussion describes the major construction activities conducted in the Legacy Soils Area during the period of 2012-2020. The building demolition activities were performed by ANPI and its contractors, under the oversight of EPA and the Arizona Department of Environmental Quality (ADEQ). ANPI was supported by a team of licensed demolition contractors and consultants. Legacy buildings were demolished following a process based on initial characterization, abatement (as necessary), demolition, and post-demolition sampling and analysis of underlying soils according to confirmatory soil sampling procedures established in an EPA-approved sampling and analysis plan and quality assurance project plan for these activities.

2.1. Characterization

The initial buildings slated for demolition were inspected to determine the potential for residual hazardous materials. The inspections included: review of historical use based on operator knowledge and available records to determine if hazardous materials had been used, manufactured, or stored within or adjacent to the building; review of any available release and/or

closure documents; visual inspections to identify any indications of an impact as well as adjacent conditions and/or discharge areas; and consideration of building age and construction. The results of the survey were then used to evaluate the potential for the existence of residual hazardous materials and to establish a list of chemicals of potential concern (COPCs) for each building and related facilities and equipment. This evaluation included classification of each building into one of three categories:

1. Buildings with no hazardous chemical use or storage;
2. Buildings with chemical use or storage and low potential for either existing impacts to environmental media or as a result of demolition activities; or
3. Buildings with hazardous chemical use or storage and likely impacts to environmental media or risk of impacts due to demolition activities.

An additional classification system was introduced which subdivided buildings based upon historical use:

P = Powder Line: buildings where explosive materials were known to have been stored, transferred, or manufactured.
C = Clean buildings: where there is no known history of use, storage, or formulation of hazardous materials.
S = Storage buildings: buildings where potentially hazardous materials were stored or present.
L = Laboratory buildings: where a wide variety of chemicals were used, tested or stored.

If the initial characterization indicated that no hazardous materials were stored or used at or within a building, no samples were collected. Where characterization determined that COPCs were potentially present on or within a building as part of the building materials or where existing equipment required decontamination, additional pre-demolition sampling was performed.

2.2. Asbestos Contaminated Materials and Lead-Based Paint Surveys and Abatement

Beginning in 2012, ANPI contracted with State-licensed inspectors to survey the structures identified for demolition for the presence of Asbestos Containing Material (ACM) and Lead-Based Paint (LBP). As necessary, the licensed inspector collected samples of ACM and or LBP sufficient to characterize these materials for removal. The LBP inspector surveyed the structures using X-ray fluorescence (XRF) to identify structures needing removal of LBP. Where equipment and/or components were left in place and the initial survey indicated the likely presence of COPCs, the contractors conducted wipe sampling or other characterization to determine if pre-demolition abatement was needed. Finally, if initial characterization indicated a potential for release of LPB or ACM to the underlying or surrounding soils, ANPI's contractors

conducted additional sampling and characterization after demolition and removal of building materials.

Based on the results of the initial characterization, ANPI established a list of COPCs for each building and a sampling plan was prepared as demolition proceeded. Any additional sampling necessary for characterization of building materials or housed equipment was completed prior to initiation of demolition. Where abatement of hazardous materials or cleaning of equipment was required, licensed contractors completed this work before building demolition work began. The initial surveying, screening and abatement of all the buildings or structures identified for demolition was completed during the period of 2012 through 2015.

2.3. Demolition of Buildings and Structures

ANPI contracted with two different demolition contractors, Ground Level of Mesa, Arizona and later NorthStar of Denver, to conduct the building demolition work. Once it had been determined that no hazardous materials remained within the building or that all potentially hazardous materials had been removed and contained or shipped off-site, the building was then demolished using heavy equipment. The non-hazardous demolition materials were transported off-site and disposed of as bulk waste. Concrete pads were broken and staged for eventual disposal or repurposing. Stain-free concrete was crushed and repurposed as road base and or erosion prevention material. Stained concrete was segregated by physical appearance and characterized. Samples of stained concrete were collected and analyzed for disposal characterization. The results of a stained concrete sampling program were used to identify stained concrete which could be repurposed on-site and stained concrete to be disposed of off-site. Except for a few buildings or structures which were surveyed and demolished in 2012 through 2014, most of the structures were demolished, and the debris was removed from the Site in 2015.

2.4. Post-Demolition Confirmatory Soils Sampling and Analysis

After the demolition activities were completed, ANPI provided post-demolition confirmatory soil sampling recommendations for specific buildings to EPA for review and approval. Following EPA's approval, ANPI's contractor (Hargis + Associates) conducted the post-demolition soil characterization and sampling. Post-demolition soil characterization and sampling was performed at 73 of 264 buildings or structures which were demolished over the 6-year period between 2012 and 2019. Please see Tables 1-6 in the *Final Comprehensive Summary Report for the Legacy Soils Area* (H+A 2019) for detailed, building by building descriptions of characterization, sampling and analysis, and waste tracking.

For the few buildings and structures demolished in 2012-2014, at EPA's direction, ANPI developed an updated soil sampling and analysis plan (SAP) and quality assurance project plan (QAPP) for the demolition work. The initial confirmatory soil sampling methodologies involved either biased or random sampling approaches. Biased sampling was utilized when historical

information or visual inspection indicated specific areas had higher potential for contamination. These areas were preferentially sampled. Where initial characterization indicated COPCs may have been used or stored within a building, random sampling was performed. Random samples were based upon a grid in larger buildings. In smaller buildings (less than 1,000 square feet) where significant impacts were not expected, composite samples were collected one sample per each 500 square feet. Details of confirmatory soil sample collection methods and procedures used from 2012 to early 2019 are provided in the work plans (H+A, 2012c and 2013a).

In the spring of 2013, the random sampling methodology was replaced by an Incremental Sampling Methodology (ISM) (H+A, 2013a). For demolition-related sampling, field personnel followed the ISM recommendations listed in the project work plans which were derived using *The Technical and Regulatory Guidance Incremental Sampling Methodology* (Interstate Technology and Regulatory Council [ITRC], 2012). EPA recommended the confirmatory soil sampling be conducted by ISM because it is a structured composite sampling and processing protocol that reduces data variability and provides a reasonably unbiased estimate of mean contaminant concentrations in a volume of soil targeted for sampling, also referred to as a decision unit (DU). ISM is performed by collecting increments of soil (typically 30 aliquots) that are combined, processed, and subsampled according to specific protocols.

In 2017, EPA formally established soils cleanup standards in Explanation of Significant Differences (ESD) #4, dated July 25, 2017, for the Legacy Soils Area (Media Component 8). The remedy for the Legacy Soils Area required the excavation of any contaminated soils above cleanup standards and off-site disposal at licensed disposal facility or on-site treatment or encapsulation. ESD #4 also eliminated Monitored Natural Attenuation (MNA) as a remedy for the Southern Area Groundwater, while retaining ICs and long-term groundwater monitoring. With that change in remedy, ANPI also discontinued a pilot project it had attempted to try to speed up the former MNA remedy. That pilot project, referred to as the P-03 treatment system, involved pumping contaminated water from the Southern Area and placing it into black plastic-lined open tanks to allow for evaporation of the water, leaving the contaminants behind in the form of salts. To decommission the tanks, some contaminants were released to the soil, requiring additional sampling, soil removal, and confirmatory soil sampling. Although not formally part of ESD #4, the actions related to the Southern Area soils are included here for completeness of the record.

3. CHRONOLOGY OF EVENTS

Outlined below are the major events related to the cleanup of the Legacy Soils Area.

2012

- February – ANPI notified EPA of the discovery of sulfur material and a rail car buried adjacent to a rail spur on the site.
- April – EPA requested ANPI submit a workplan to characterize the sulfur material.

- June- ANPI notified EPA of its intention to clean up any legacy contamination problems and remove historic, degraded buildings on-site which posed a health and safety risk.
- August - ANPI submitted a work plan to demolish and decommission an estimated 180+ historic buildings in a series of seven phases.
- August–December - ANPI conducted 36 surveys and 20 abatements for ACM; performed 34 surveys and six abatements for LBP; demolished 18 buildings along the historic Powder Line; and conducted confirmatory soil sampling of 4 buildings in Phase 1A and 1B.

2013

- January – ANPI submitted a request to dispose of ACM wastes off-site at Cactus Landfill. EPA approved this request.
- February – ANPI submitted a revised *Quality Assurance Project Plan (QAPP), Appendix G*, for the sampling protocols and laboratory analysis related to the building demolition activities.
- January- December - ANPI conducted 129 surveys and 16 abatements for ACM; performed 137 surveys and 6 abatements for LBP; demolished or partially demolished 26 buildings along the historic Powder Line; and conducted confirmatory soil sampling of eight buildings.
- May-December - ANPI conducted a NHPA survey in three phases of all the historic structures identified for demolition on the Site; as part of the process EPA consulted with nearby tribes.
- December – ANPI, EPA and Arizona State Historic Preservation Office (SHPO) signed a Memorandum of Agreement (MOA) for completing the NHPA survey.

2014

- January- December - ANPI conducted five surveys and four abatements for ACM; performed five surveys and two abatements for LBP; demolished or partially demolished nine buildings along the historic Powder Line; and conducted confirmatory soil sampling of seven buildings.
- February – ANPI notified EPA that explosive wastes were identified in two buildings on the Powder Line (2 hods with nitroglycerin (NG) wastes in Building 51 and detonation cord containing PETN in Building 21).
- March – EPA approved ANPI's characterization report for the rail cars that contained elemental sulfur and requested ANPI submit an excavation and removal plan.
- March – EPA requested ANPI submit a Removal Action Plan for removing or destroying the explosive wastes for Building 51.
- April – EPA approved the Phase 3 End of Field Report for NHPA activities.
- June – ANPI notified EPA that it planned to conduct confirmatory soil sampling and demolition work of Phase 2 buildings where a new Prill Barn was planned for construction.

- September – EPA approved ANPI's Time-Critical Removal Action (TCRA) Plan and conducted community outreach activities related to the planned on-site controlled burn for the Building 51 explosive materials.
- October - ANPI completed the Time-Critical Removal Action (TCRA) for Building 51 by conducting a controlled open burn to remove nitroglycerin (NG) waste material and detonation cord.

2015

- January-March - ANPI conducted 90 abatements for ACM; performed 38 abatements for LBP; demolished 102 buildings along the historic Powder Line; and conducted confirmatory soil sampling of 24 buildings. (Forty-four of the buildings that were demolished in 2015 did not have confirmation soil sampling conducted until 2018.)
- March - ANPI staked building locations during demolition with whiskers at the building corners and a pylon with the building number marked with a black marker to identify the location for future confirmatory soil sampling (which was not conducted until 2018.)
- April - ANPI notified EPA that a subcontractor (Ground Level) had disposed of an estimated 1,100 tons of demolition wastes on private property in Benson, Arizona (approximately 10 miles from the ANPI facility).
- April – ANPI excavated the metal tanks and completed characterization of the sulfur material adjacent to the rail spur, originally discovered in 2012.
- May – ANPI conducted additional confirmatory soil sampling at Buildings 78, 79, 168 and 239 in the Prill Barn Area.
- June - ANPI conducted independent sampling and analysis for metals of the demolition debris on the Benson private property and the sub-contractor completed a report in July.
- June – EPA approved ANPI's April 2015 request for off-site disposal of lead-contaminated wastes at Cactus Landfill.
- August – ANPI notified EPA of planned off-site disposal for ACM wastes generated during the demolition activities at previously-approved Cactus Landfill.
- September – ANPI submitted updated tracking logs for all the waste streams generated on-site and the dates wastes were sent to the final disposal facilities.
- October – ADEQ and ANPI conduct a joint inspection of the demolition debris on the Benson private property.

2016

- March – EPA approved the SAP for characterizing the demolition debris on the Benson private property, and conducted oversight of the sampling activities with the Army Corps.
- May – ANPI's contractors excavated the demolition debris from the Benson private property with EPA and Army Corps oversight, disposed of the debris at an EPA-approved regulated landfill and then conducted confirmatory soil sampling of the underlying soils.

- July – EPA approved ANPI's request to dispose of the sulfur mixed with soils from the railcar tanks decommissioning at the Cactus Landfill.
- August – EPA approved ANPI's request to recycle the corroded scrap metal from the railcar tanks at SA Recyling; and ANPI completed removal of these sulfur-related wastes to Cactus Landfill.
- August – EPA approved ANPI's Final TCRA Report for the Building 51 controlled burn in late 2014.
- September – EPA approved and ANPI shipped lead-contaminated wastes from the building demolition activities to Cactus Landfill.
- September – EPA approved the final close-out report for the removal of the demolition debris from the Benson private property.
- September – EPA approved the *Sulfur Tanks Removal Closure Report*.
- September – EPA informed ANPI that no additional demolition work, other than disposal activities related to prior approvals, could be conducted until EPA and ANPI enter into an Administrative Settlement Agreement on Consent (AOC) for the Legacy Soils Area.

2017

- January-February - ANPI completed characterization of soils beneath Tank 67, a 3.5 million-gallon storage tank with reported historic leaks of fertilizer solutions; a final report was approved by EPA in May.
- January-March - ANPI completed a site walk-through and identified an additional 27 structures that were demolished along the historic Powder Line with unknown demolition dates at the time of the *2012-2016 Building Demolition Summary Report*.
- February – EPA and the Army Corps conducted a Five-Year Review site inspection.
- June – ANPI completed the *2012-2016 Building Demolition Summary Report, Rev. 2.0*.
- June – EPA approved ANPI's request to dispose of stockpiled soils excavated as a result of the building demolition confirmatory soil sampling for off-site disposal at the Cactus Landfill.
- July – EPA approved the updated Building Demolition Program SAP, Rev. 4.0.
- July – EPA signed Explanation of Significant Differences (ESD) #4, incorporating the Legacy Soils Area into the Superfund remedy and changing the Southern Area Groundwater remedy.
- August – ANPI subcontractors (SHC and ACT) performed ACM and LBP survey. All LBP containing wood materials samples were below the RCRA threshold of 5 milligrams per liter (mg/L) for lead.
- November – ANPI collected and analyzed concrete samples with residue or staining.
- December – ANPI shipped 13 loads of building demolition material and 8 loads of railroad ties to Cactus landfill, and 9 loads of scrap metal to SA Recycling.

2018

- January- February – ANPI conducted confirmatory sampling using ISM protocol on building locations demolished in 2015. (If building location markers were no longer present delineating the footprints from 2015, former footprints were determined from field maps, existing surface features and relative locations to other located markers.)
- January – ANPI conducting building demolition activities, including shipping 21 loads of building demolition waste materials to Cactus Landfill and 9 loads of scrap metal shipped to SA Recycling.
- February – ANPI submitted a Residual Demolition Concrete Materials Characterization Work Plan for EPA review.
- March – ANPI conducted ACM abatement and removal of an ACM-coated lead liner at Nitrator 1 Building. Demolition of Nitrator #1 (which began in 2015 but was suspended until 2018 when the building was demolished).
- March – ANPI conducted confirmatory soil sampling at Nitrator 2 (Building 212).
- April – EPA approved ANPI's disposal and/or reuse of uncontaminated concrete on-site, but required additional characterization of concrete previously identified with lead or total petroleum hydrocarbon (TPH) staining.
- May – ANPI completed an updated revised *Sampling and Analysis Plan for the Characterization of Stained Concrete*. (Amendment #2 to the July 2017 Building Demolition Program SAP, Revision 4.0.)
- July – ANPI notified EPA of the discovery of additional historic structures outside the perimeter fence line and recommended soil sampling for the historic Old Nitrators 1 and 2 and associated deteriorated structures (building sites 25, 27, 86, 101, 112, and 128, 198, and 343).
- July – ANPI collected samples for characterization of Piezometer P-03 in support of decommissioning of the related P-03 treatment system.
- July - ANPI submitted a report titled *Characterization of Stained Concrete and Discarded Brick*.
- August – ANPI conducted a field inspection and flagged for soil sampling to be conducted of additional structures discovered outside of perimeter fence.
- August – ANPI completed the demolition of Nitrator #1 located within the Legacy Soils Area.
- August - ANPI submitted a revised *Workplan for Characterization of P-03 Treatment System for Decommissioning, Revision 1.0*, for EPA review.
- October – ANPI provided results of laboratory analyses for samples of stained concrete, bricks, and waterproofing tar collected in September 2018 to EPA and ADEQ.
- November – EPA sent a letter to AZ SHPO confirming that all activities required under the NHPA had been met in 2013 and 2014, and therefore the 2013 MOA was terminated.
- December – ANPI completed off-site disposal of ACM wastes, including 2 roll-off containers with ACM from steam piping and multiple buildings.

2019

- February - EPA approved the off-site disposal of the lead sheeting materials from Nitrator #1.
- March - ANPI disposed off-site the lead sheeting materials from Nitrator #1 at U.S. Ecology's landfill in Beatty, Nevada.
- June – ANPI completed the first draft of *Draft Legacy Soils Area Close Out Report.*
- July – ANPI submitted a draft *Disposal Plan for Perched Zone Liquids and Solids Contained in the P-03 Stock Tanks*.
- October – EPA approved a revised *Disposal Plan for Perched Zone Liquids and Solids Contained in the P-03 Stock Tanks*.
- October – ANPI completed confirmatory soil sampling and included the laboratory results in a second draft of the *Final Comprehensive Summary Report for the Legacy Soils Area.*
- November – ANPI decommissioned the P-03 tanks used for the evaporation of perched zone liquids until 2017, when EPA's ESD #4 changed the remedy for the Southern Area Groundwater.
- December – ANPI submitted a third draft of the *Final Comprehensive Summary Report for the Legacy Soils Area*.

2020

- February – EPA submitted a final set of comments on the *Final Comprehensive Summary Report for the Legacy Soils Area*.
- March - ANPI completed confirmatory soil sampling of the P-03 tank area and provided a final report to EPA closing out this remaining area with potential soils contamination on the Site.
- August – EPA approved the *Final Comprehensive Summary Report for the Legacy Soils Area*.
- October – ANPI removed any contaminated wastes and soils generated during the P-03 decommissioning activities from the site and disposed of them at the Beatty Landfill in Nevada.

4. PERFORMACE STANDARDS AND CONSTRUCTION QUALITY CONTROL

When the *September 2008 Final Remedial Action Report for Soils* was completed, EPA and the State reviewed the remedial action contract and construction for compliance with quality assurance and quality control (QA/QC) protocols. Construction activities at the site were determined to be consistent with the requirements of the ROD and subsequent amendments and ESDs. The subcontractors for construction adhered to the approved construction quality control plan (CQCP). The construction quality assurance plan (CQAP) incorporated all EPA and State requirements. All confirmatory inspections, independent audits, and evaluations of materials and workmanship were performed in accordance with the construction drawings, technical specifications and CQAP. Construction quality assurance was performed by the RAC contractor

firm, which maintained a constant on-site presence. The EPA RPM and State regulators visited the site during construction activities to review construction progress and evaluate and review the results of QA/QC activities. Deviations or non-adherence to QA/QC protocols, drawings, or specifications were properly documented and resolved.

For this later soils-related construction activities conducted for the Legacy Soils Area during the period of 2012 through 2020, EPA's focus was on potential soils contamination as a result of the building demolition process. EPA required ANPI to develop an updated *Sampling and Analysis Plan and a Quality Assurance Project Plan* (QAPP), which incorporated all EPA and State QA/QC procedures and protocols, for the confirmatory soil sampling work. EPA analytical methods were used for all confirmation samples conducted during these remedial activities. Procedures and protocols followed for soil sample analysis were conducted using an EPA-approved laboratory contracted to by ANPI. EPA and the State determined the analytical results are accurate to the degree needed to assure satisfactory execution of the remedial action.

5. FINAL INSPECTION AND CERTIFICATIONS

The work for the Legacy Soils Area was conducted during the period of 2012 through 2020 and involved several stages, including initial surveying, testing and abating of ACM and LBP, followed by demolition of 264 buildings and structures, characterization of stained concrete, off-site disposal of contaminated demolition wastes and contaminated soils, and completion of confirmatory soils sampling activities.

During the course of this seven-year period of work, numerous site inspections were conducted by EPA to conduct oversight of various activities, including an extended period in 2016, when EPA and the Army Corps oversaw all the characterization work and removal of demolition debris from the private property in Benson, Arizona. The final walk-through inspection of the completion of this work was conducted by EPA on October 30, 2019. The final documentation of this work was certified by EPA in its approval of ANPI's *Final Comprehensive Summary Report for the Legacy Soils Area*, *dated August 28, 2020*.

6. O&M ACTIVITIES

Institutional controls (ICs) are a requirement of the ROD Amendment (EPA 2005). EPA's ESD #4 (2017) further expands the ICs established in EPA's 2005 ROD Amendment for the capped inactive ponds where contaminated soils above residential cleanup levels remain on-Site. ESD #4 required that, if soils below industrial (non-residential) cleanup standards and above residential cleanup standards are left on-Site, ICs restricting recreational and residential use will be put in place to prevent direct contact with contaminated soils and to protect and caution the public about the presence of contaminants on-Site.

As a result of the completion of all the confirmatory soil sampling for the Legacy Soils Area, as documented in ANPI's final comprehensive summary report (Hargis, 2019) for this area, there were no areas where contaminated soils were left in place on the Site above Arizona residential SRLs. In all instances where contaminated soils were detected during confirmatory soil sampling activities, any residual contamination was removed for off-site disposal. Therefore, at this time, there are no ICs or further O&M activities required for the Legacy Soils Area. Additional monitoring and investigative data can require remedies to be changed or modified if additional areas of soils contamination are discovered at the Site.

7. CONTACT INFORMATION

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8. REFERENCES

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9. FIGURES

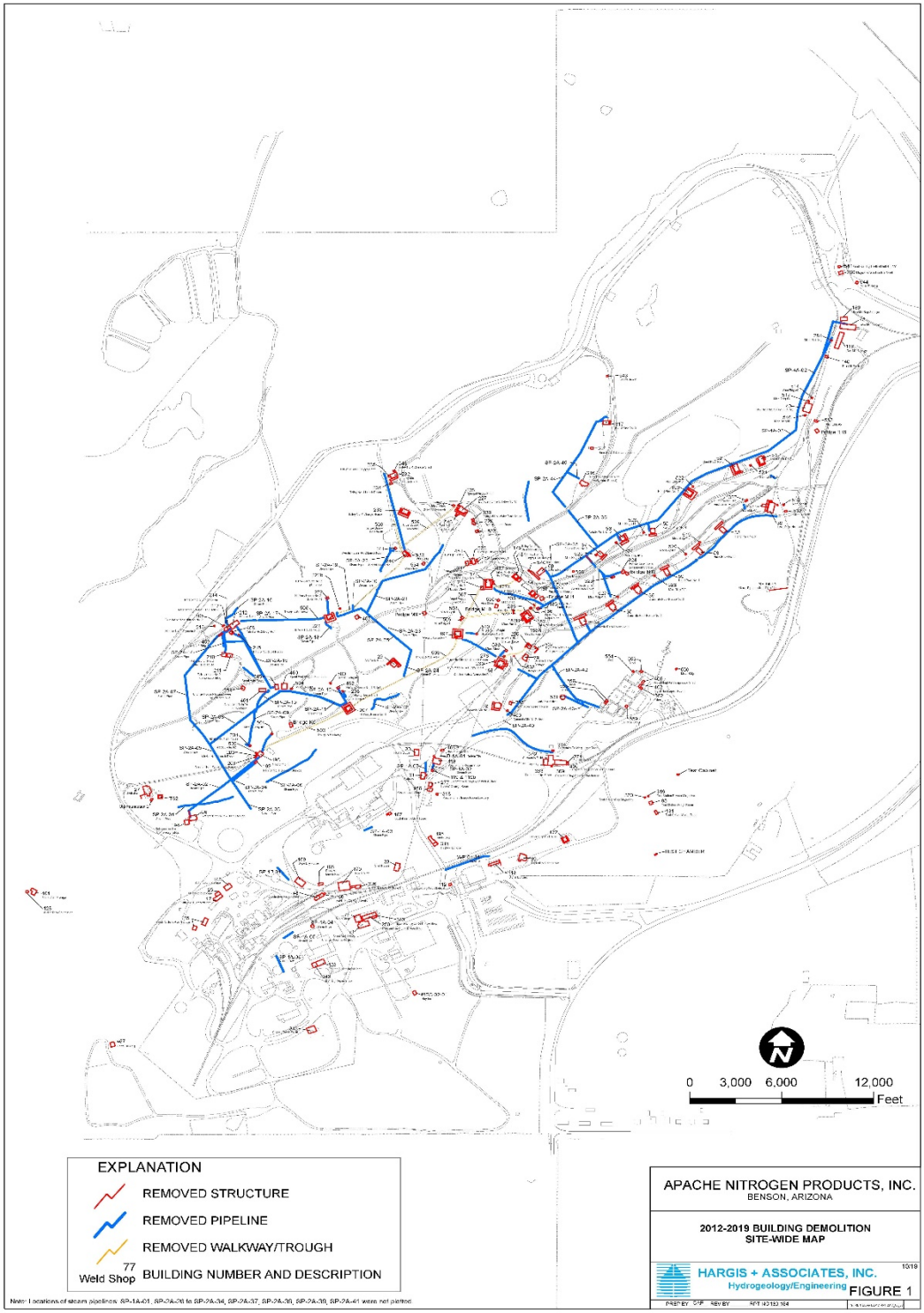

Figure 1: 2012-2019 Building Demolition Site-Wide Map, Legacy Soils Area from the Final Draft Legacy Soils Area Report