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Buffalo District

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ACRONYMS AND ABBREVIATIONS

%D	Percent Difference
µg/kg	Micrograms Per Kilogram
µg/L	Micrograms Per Liter
µrem/hr	Micro Rem Per Hour
ABS	Dermal Absorption
ACM	Asbestos Containing Material
ADD	Average Daily Dose
AEC	Atomic Energy Commission
AHA	Activity Hazard Analysis
AL	Action Level
amsl	Above Mean Sea Level
ANL	Argonne National Laboratory
ANSI	American National Standards Institute
ARAR	Applicable or Relevant and Appropriate Requirements
AST	Above Ground Storage Tank
ASTM	American Society for Testing and Materials
ATSDR	Agency for Toxic Substances and Disease Registry
AutoCAD	Automated Computer-Aided Drafting
Bb	Ingestion-to-Beef Transfer Factors
BAF	Bioaccumulation Factor
BAR	Beta Activity Ratio
BCF	Bioconcentration Factors
BCG	Biota Concentration Guides
BCPM	Background Sample Count-Rate
BEGe	Broad Energy Germanium
BERA	Baseline Ecological Risk Assessment
bgs	Below Ground Surface
BRA	Baseline Risk Assessment
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes
BW	Body Weight
CCl ₄	Carbon Tetrachloride
CAL EPA	California Environmental Protection Agency
CEDE	Committed Effective Dose Equivalents
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CG	Composite Groups
CGI	Combustible Gas Indicator
CLP	Contract Laboratory Program
cm/s	Centimeters Per Second
cm ²	Square Centimeters
COC	Constituent Of Concern
COEC	Constituent of Ecological Concern
COI	Constituent of Interest
COPC	Constituent of Potential Concern
COPEC	Constituent of Potential Ecological Concern
CSF	Cancer Slope Factor

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ACRONYMS AND ABBREVIATIONS (CONTINUED)

CSM	Conceptual Site Model
CTE	Central Tendency Exposure
CVAA	Cold Vapor Atomic Absorption
CWM	Chemical Waste Management
CX	Center of Expertise
D&D	Decontamination and Decommissioning
DAD	Dermal Absorbed Dose
DCF	Dose Conversion Factor
DoD	United States Department of Defense
DOE	United States Department of Energy
dpm	Disintegrations Per Minute
DQIs	Data Quality Indicators
DQO	Data Quality Objectives
ECSM	Ecological Conceptual Site Models
ED	Exposure Duration
EDD	Electronic Data Deliverables
EDE	Effective Dose Equivalent
EDQL	Ecological Data Quantity Levels
Eh	U-Speciation Driver
EM	Electromagnetic
EM	USACE Engineering Manual
EPA	United States Environmental Protection Agency
EPC	Exposure Point Concentration
EQL	Estimated Quantitation Limit
ERA	Ecological Risk Assessment
ERDC	Engineer Research and Development Center
ERM	Erm-Midwest, Inc.
ESV	Ecological Screening Values
EU	Exposure Unit
F ₂	Fluorine Gas
FGR	Federal Guidance Report
FIDLER	Field Instrument for the Detection of Low Energy Radiation
FS	Feasibility Study
FSP	Field Sampling Plan
ft	Feet
ft/day	Feet Per Day
FTP	Field Technical Procedure
FUSRAP	Formerly Utilized Sites Remedial Action Program
FWEC	Foster Wheeler Environmental Corporation
FWS	Fish and Wildlife Service
GC	Clayey Gravel
gal	Gallon
GCPM	Gross Sample Count-Rate
GDP	Gaseous Diffusion Plant

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ACRONYMS AND ABBREVIATIONS (CONTINUED)

GEL	General Engineering Laboratories, Inc.
GFPC	Gas Flow Proportional Counting
GI	Gastrointestinal
G-M	Geiger Mueller Detector
GMS	Groundwater Modeling System
gpm	Gallons Per Minute
GPR	Ground-Penetrating Radar
GPS	Global Positioning System
GSE	Ground Surface Evaluations
GWS	Gamma Walkover Surveys
HCC	Harshaw Chemical Company
HEAST	Health Effects Assessment Summary Tables
HEPA	High Efficiency Particulate Air
HF	Hydrofluoric Acid
HELP	Hydrologic Evaluation of Landfill Performance
HHRA	Human Health Risk Assessment
HI	Hazard Index
HI	Health Index
HQ	Hazard Quotient
hr	Hour
HTRW	Hazardous, Toxic, and Radioactive Waste
IA	Investigation Area
IAEA	International Atomic Energy Agency
IBI	Index of Biotic Integrity
ICI	Invertebrate Community Index
ICP-MS	Inductively Coupled Plasma – Mass Spectrometry
ICRP	International Commission on Radiological Protection
ID	Identification Number
IDW	Investigation-Derived Waste
ILCR	Incremental Lifetime Cancer Risk
IRIS	Integrated Risk Information System
K	Hydraulic Conductivity
K _d	Partition Coefficient
Kz	Vertical Conductivity
kg/day	Kilograms Per Day
KPA	Kinetic Phosphorescence Analyzer
lbs/day	Pounds Per Day
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOAEL	Lowest Observed Adverse Effects Level
LOD	Limits of Detection
LOOW	Lake Ontario Ordnance Works
LQAP	Laboratory Quality Assurance Plan
M	Molar

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ACRONYMS AND ABBREVIATIONS (CONTINUED)

m	Meter
m ²	Square Meter
MARLAP	Multi-Agency Radiological Laboratory Analytical Protocols Manual
MARSSIM	Multi-Agency Radiation Site Survey Investigation Manual
MCL	Maximum Concentration Level
MDA	Minimum Detectable Activity
MDC	Minimum Detectable Concentration
MDCR	Minimum Detectable Count Rate
MDL	Method Detection Limit
MCW	Mallinckrodt Chemical Works
MED	Manhattan Engineer District
mg/kg	Milligrams Per Kilograms
mg/L	Milligrams Per Liter
MHz	Megahertz
ML-CL	Soil Samples Silty Clay
MRL	Minimal Risk Level
MS	Matrix Spike
MSD	Matrix Spike Duplicate
MT3DMS	Modular 3-D Transport for Multi-Species Model
MTU	Metric Tons of Uranium
MU	Master Unit
MVUE	Minimum-Variance Unbiased Estimators
NAD	Normalized Absolute Difference
NaI	Sodium Iodide
NBS	National Bureau of Standards
NCDC	National Climatic Data Center
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NCPM	Net Count-Rate
NGVD	National Geodetic Vertical Datum
NIFW	Non-Intrusive Field Work
NIST	National Institute of Standards and Technology
NMSS	Nuclear Material Safety and Safeguards
NOAA	National Oceanic and Atmospheric Administration
NOAEL	No Observed Adverse Effects Level
NPDES	National Pollutant Discharge Elimination System
NRC	Nuclear Regulatory Commission
NUREG	US Nuclear Regulatory Commission Regulation
OAC	Ohio Administrative Code
ODNR	Ohio Department of Natural Resources
Ohio DoH	Ohio Department of Health
Ohio EPA	Ohio Environmental Protection Agency
OSRD	Office of Scientific Research and Development
OSTI	Office of Science Technical Information
PA	Preliminary Assessment
PAH	Polycyclic Aromatic Hydrocarbon

TABLE OF CONTENTS (CONTINUED)

ACRONYMS AND ABBREVIATIONS (CONTINUED)

PARCC	Precision, Accuracy, Representativeness, Completeness, and Comparability
PBT	Persistent, Bioaccumulative, and Toxic
PCB	Polychlorinated Biphenyls
pCi	Picocurie
pCi/g	Picocurie Per Gram
pCi/L	Picocurie Per Liter
PEST	Parameter Estimating Software Tool
pH	Potential of Hydrogen
PID	Photoionization Detector
POA	Plan of Action
PPE	Personal Protective Equipment
PPM	Parts Per Million
PPRTV	Provisional Peer Reviewed Toxicity Values
PQL	Practical Quantitation Limit
PRG	Preliminary Remediation Goals
p-value	Probability Value
PVC	Polyvinyl Chloride
PWP	Project Work Plan
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
QCP	Quality Control Plan
QCSR	Quality Control Summary Report
QHEI	Qualitative Habitat Evaluation Index
r	Correlation Coefficient
R	rejected
rad	Unit of Radiation Dose
RAGS	Risk Assessment Guidance for Superfund
RAM	Radioactive Material
RAMSA	Radioactive Material Storage Area
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RESRAD	Residual Radioactivity Computer Code
RfC	Reference Concentration
RfD	Reference Dose
RI	Remedial Investigation
RIR	Remedial Investigation Report
RL	Reporting Limit
RM	River Mile
RME	Reasonable Maximum Exposure
RMSA	Radioactive Material Storage Areas
ROD	Record of Decision
ROPC	Radionuclide of Potential Concern
RPD	Relative Percent Difference
RPM	Radiation Protection Manager

TABLE OF CONTENTS (CONTINUED)

ACRONYMS AND ABBREVIATIONS (CONTINUED)

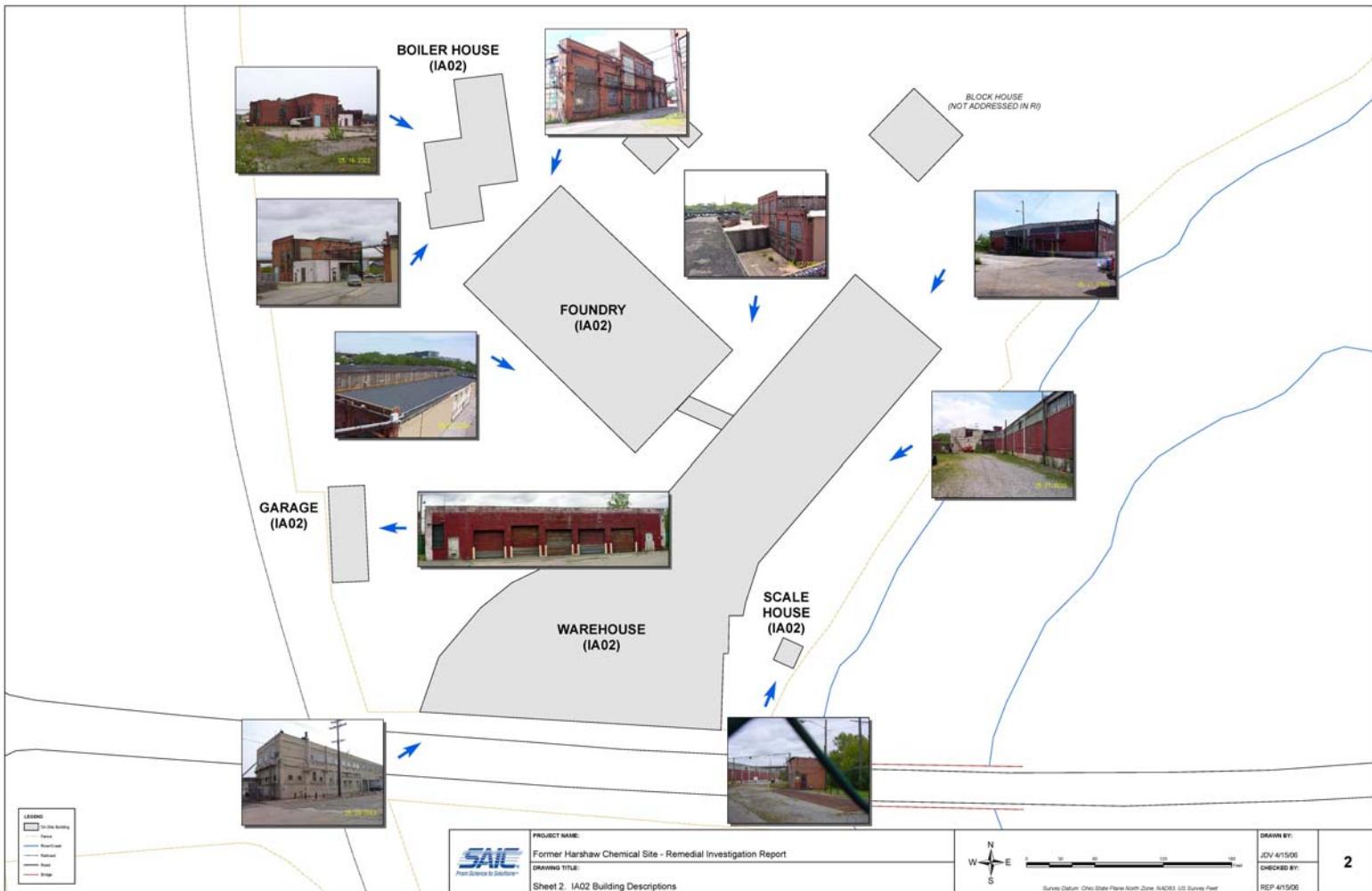
RPP	Radiation Protection Plan
RU	Recycled Uranium
SAIC	Science Applications International Corporation
SAP	Sampling and Analysis Plan
SDG	Sample Delivery Group
SLERA	Screening Level Ecological Risk Assessment
SMDP	Scientific Management Decision Point
SOP	Standard Operating Procedures
SPv	Soil-to-Plant Bioconcentration Factor
SP-SM	Soil Samples Gravelly Sand
SRC	Site-Related Constituents
SRV	Sediment Reference Value
SSHP	Site Safety and Health Plan
STL	Severn Trent Laboratories
STSC	Superfund Health Risk Technical Support Center
SU	Survey Unit
SVOC	Semi-Volatile Organic Compound
T&E	Threatened And Endangered
TA	Test America
TAL	Target Analyte List
TBD	To Be Determined
TBP-kerosene	Tributyl Phosphate in Kerosene
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids
TEC	Threshold Effect Concentration
TEDE	Total Effective Dose Equivalent
TOC	Top of Casing
TPH	Total Petroleum Hydrocarbons
TPH-DRO	Total Petroleum Hydrocarbons – Diesel Range Organics
TPP	Technical Project Planning
TRV	Toxicity Reference Values
TSDF	Treatment, Storage and Disposal Facilities
TSS	Total Suspended Solids
U ₃ O ₈	Uranium Oxide
Ub	Urban Land
UCL	Upper Confidence Limit
UF ₄	Uranium Tetrafluoride
UF ₆	Uranium Hexafluoride
UCl ₄	Uranium Tetrachloride
UI	Uncertain Identification
UO ₂	Uranium Dioxide
UO ₃	Uranium Trioxide
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture

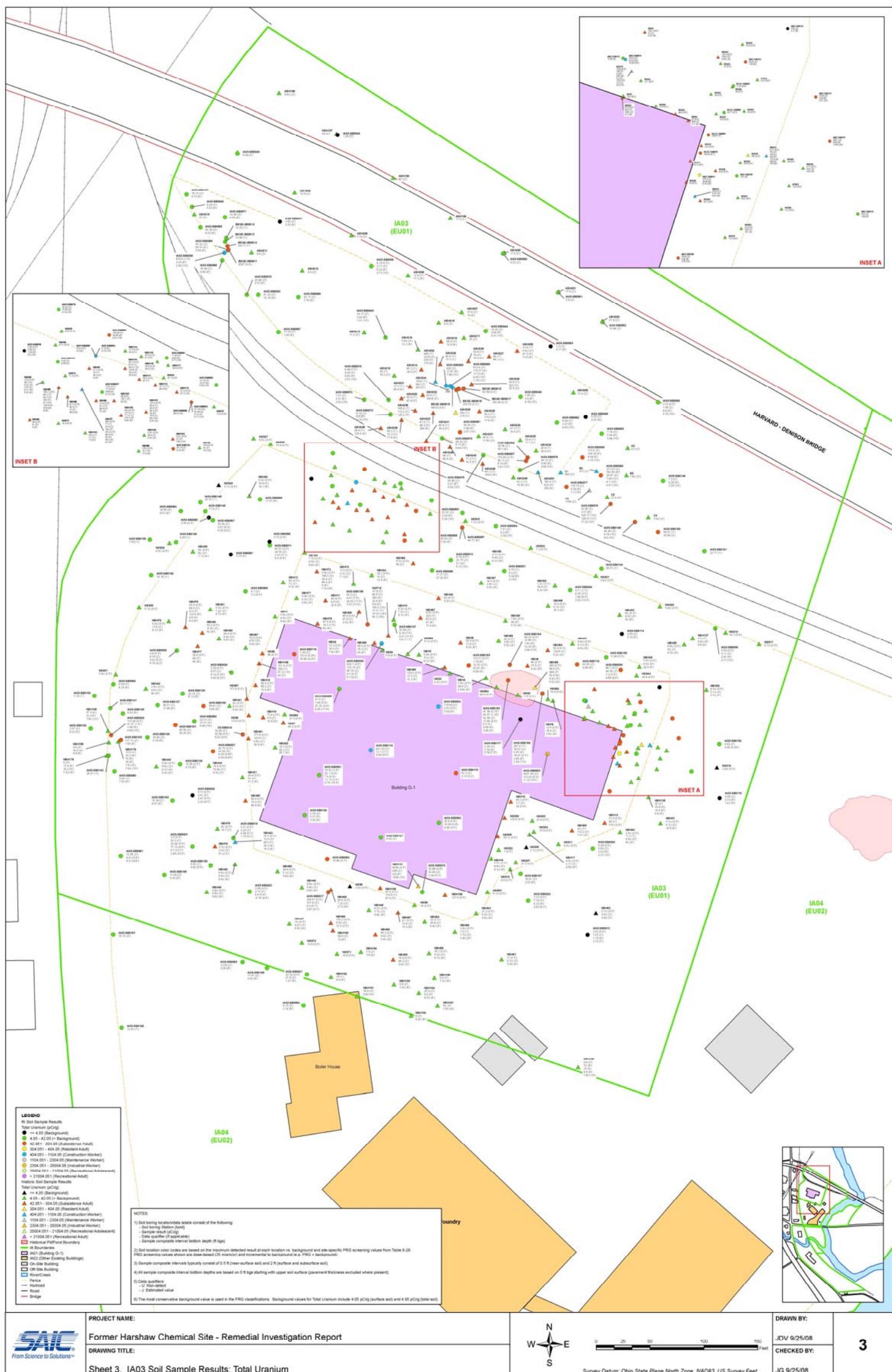
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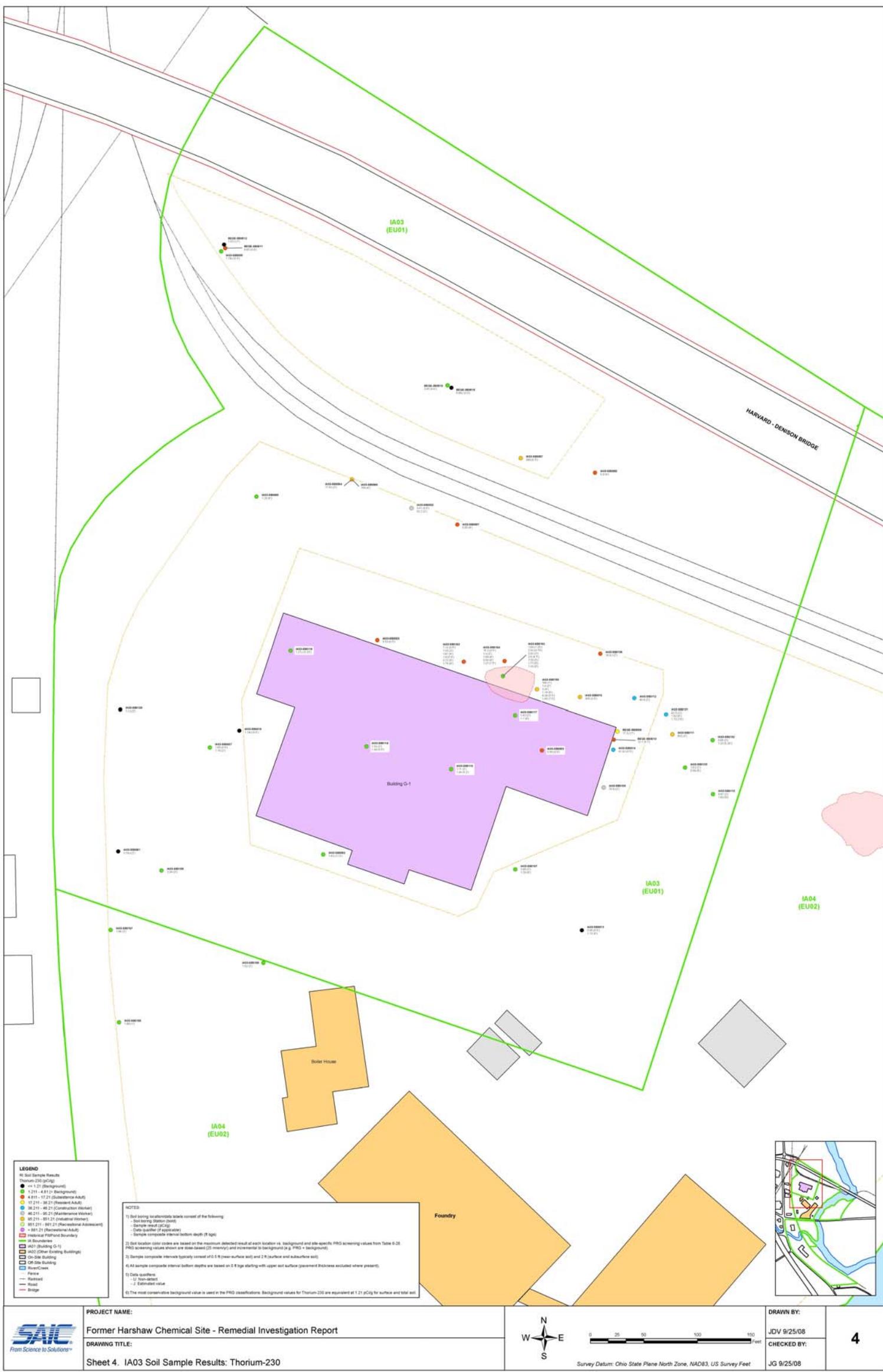
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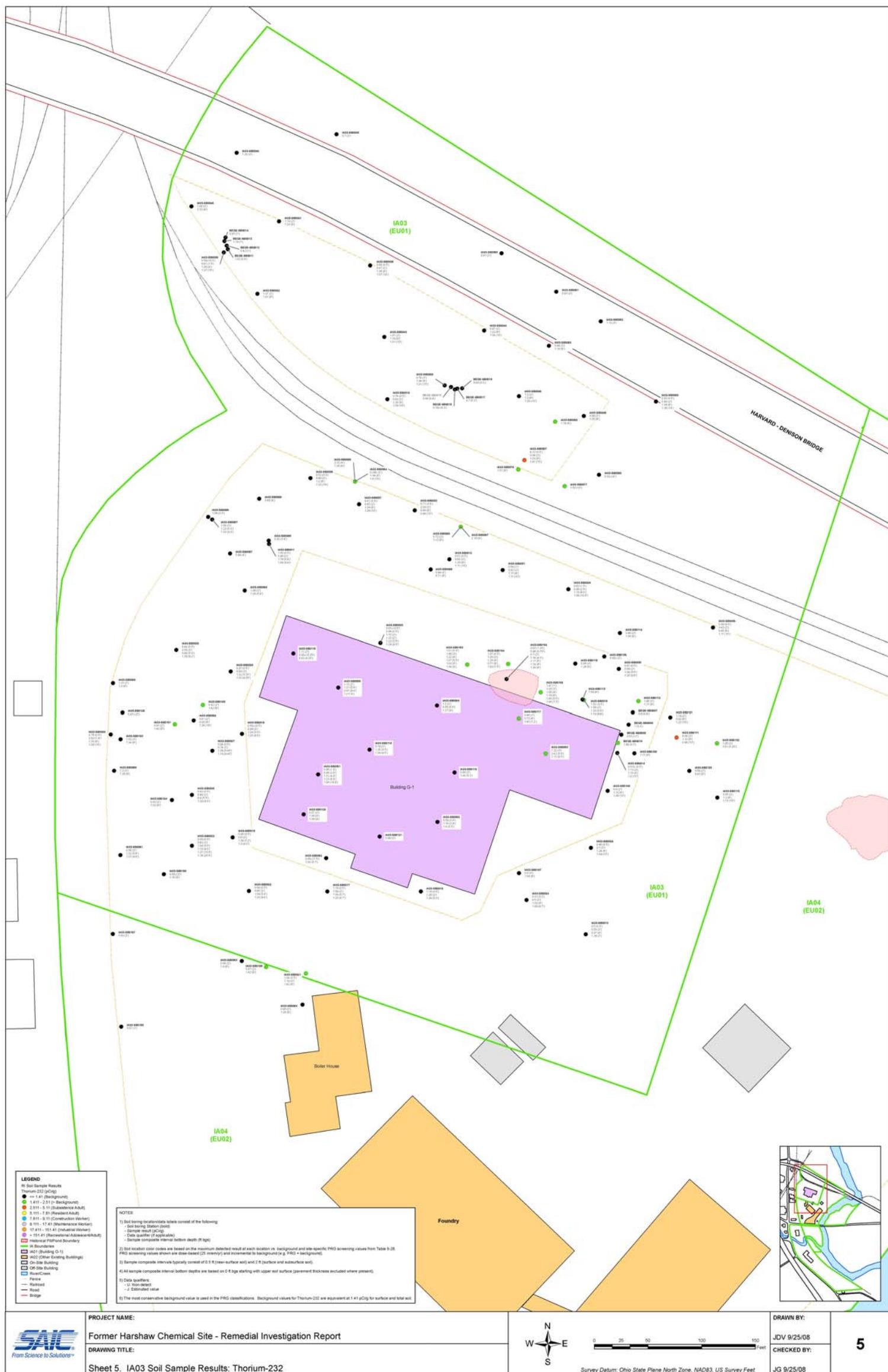
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UST	Underground Storage Tank
UTL	Upper Tolerance Limit
VOC	Volatile Organic Compounds
WAC	Waste Acceptance Criteria
WSDE	Washington State Department of Ecology
WWH	Warm Water Habitat
XRF	X-ray Fluorescence Spectrometry
yr	Year

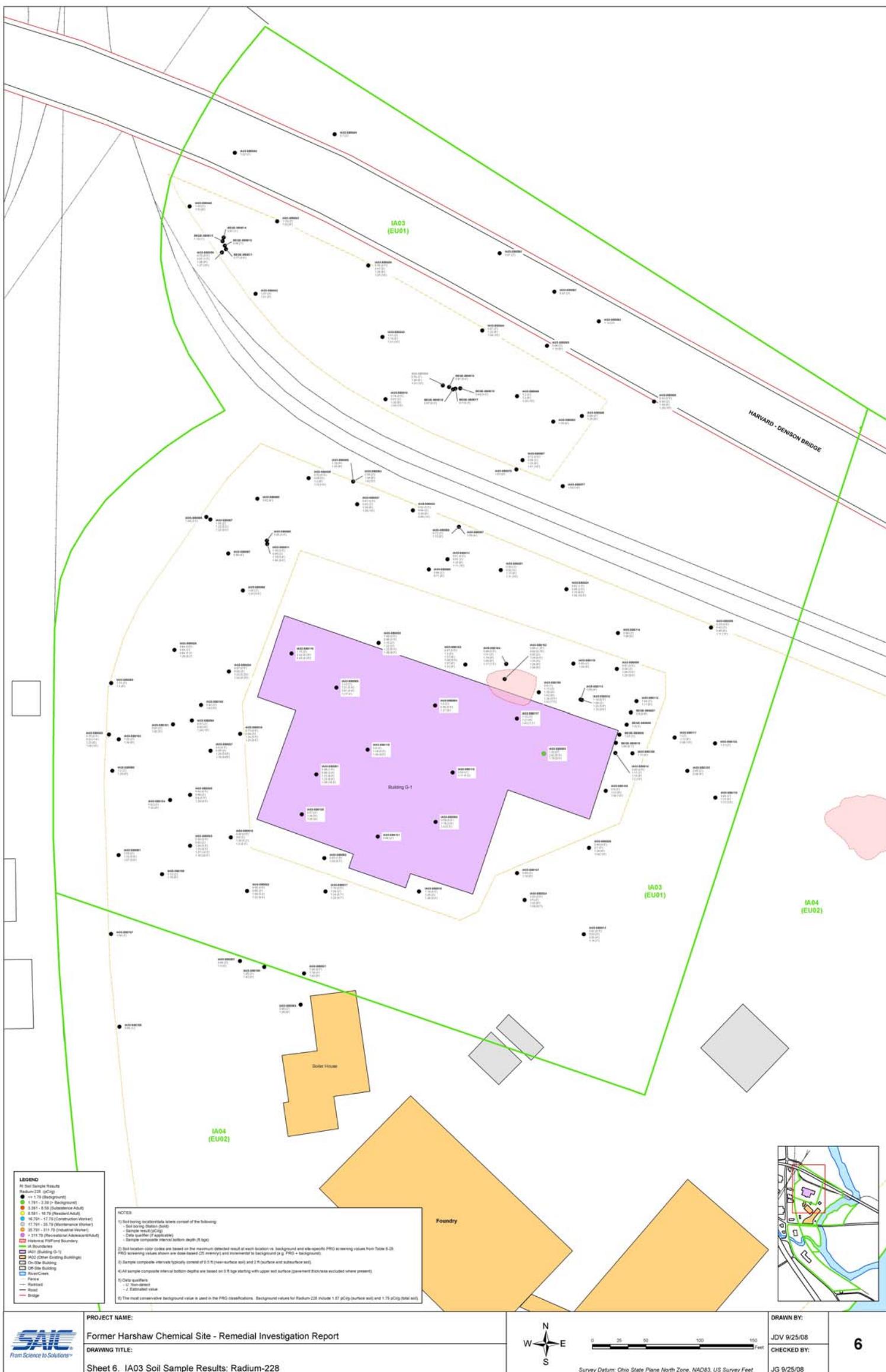


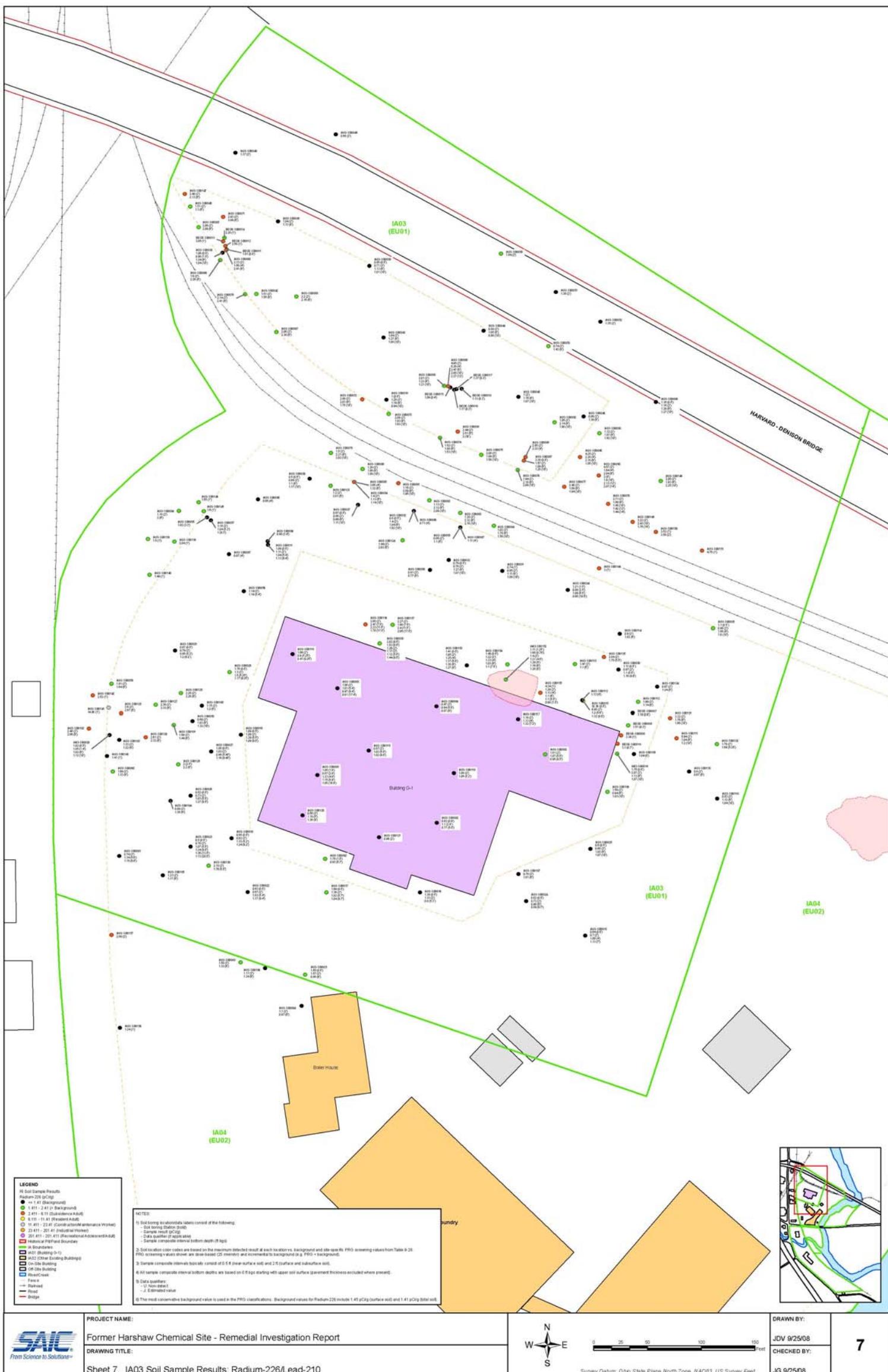


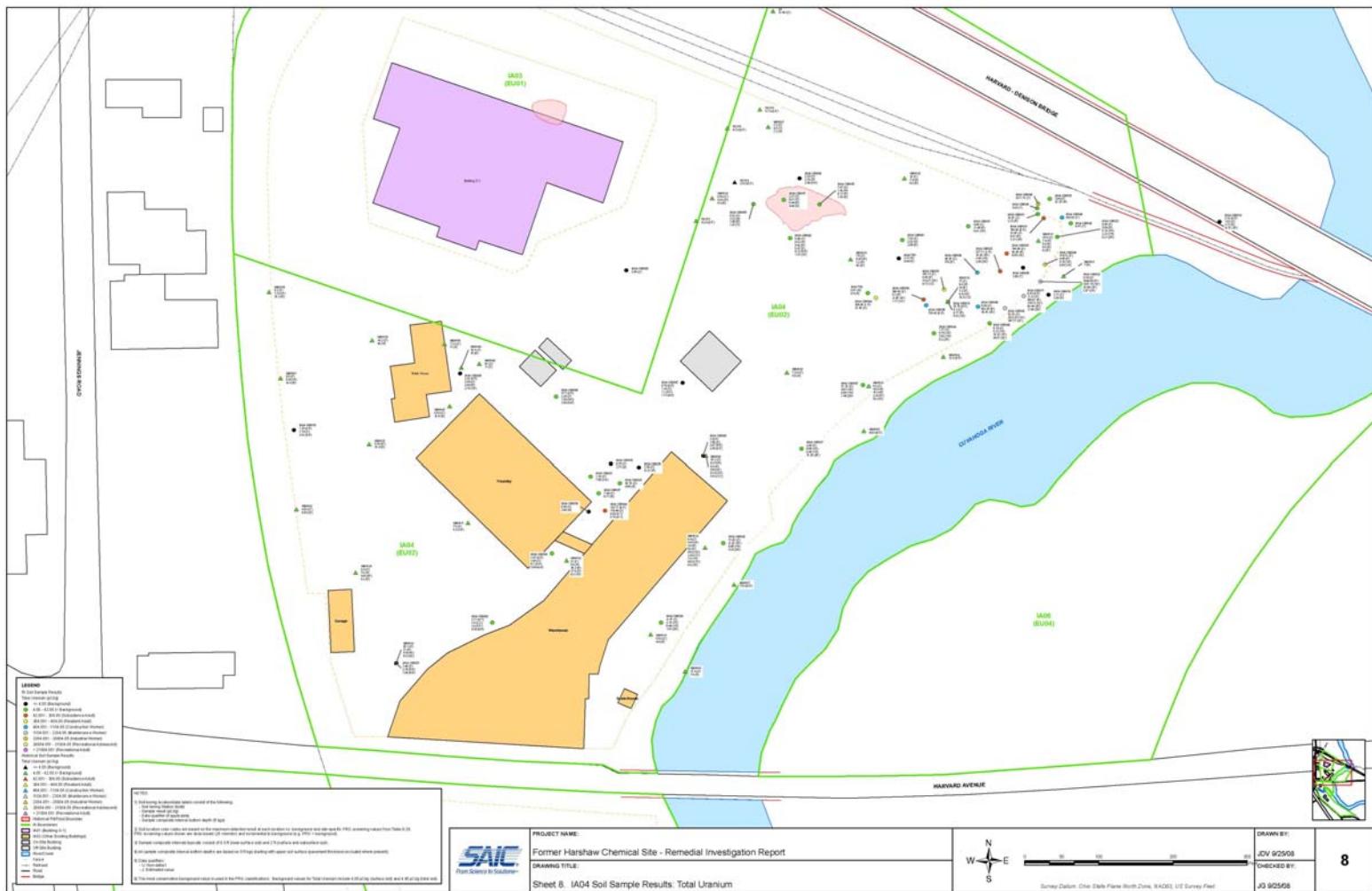


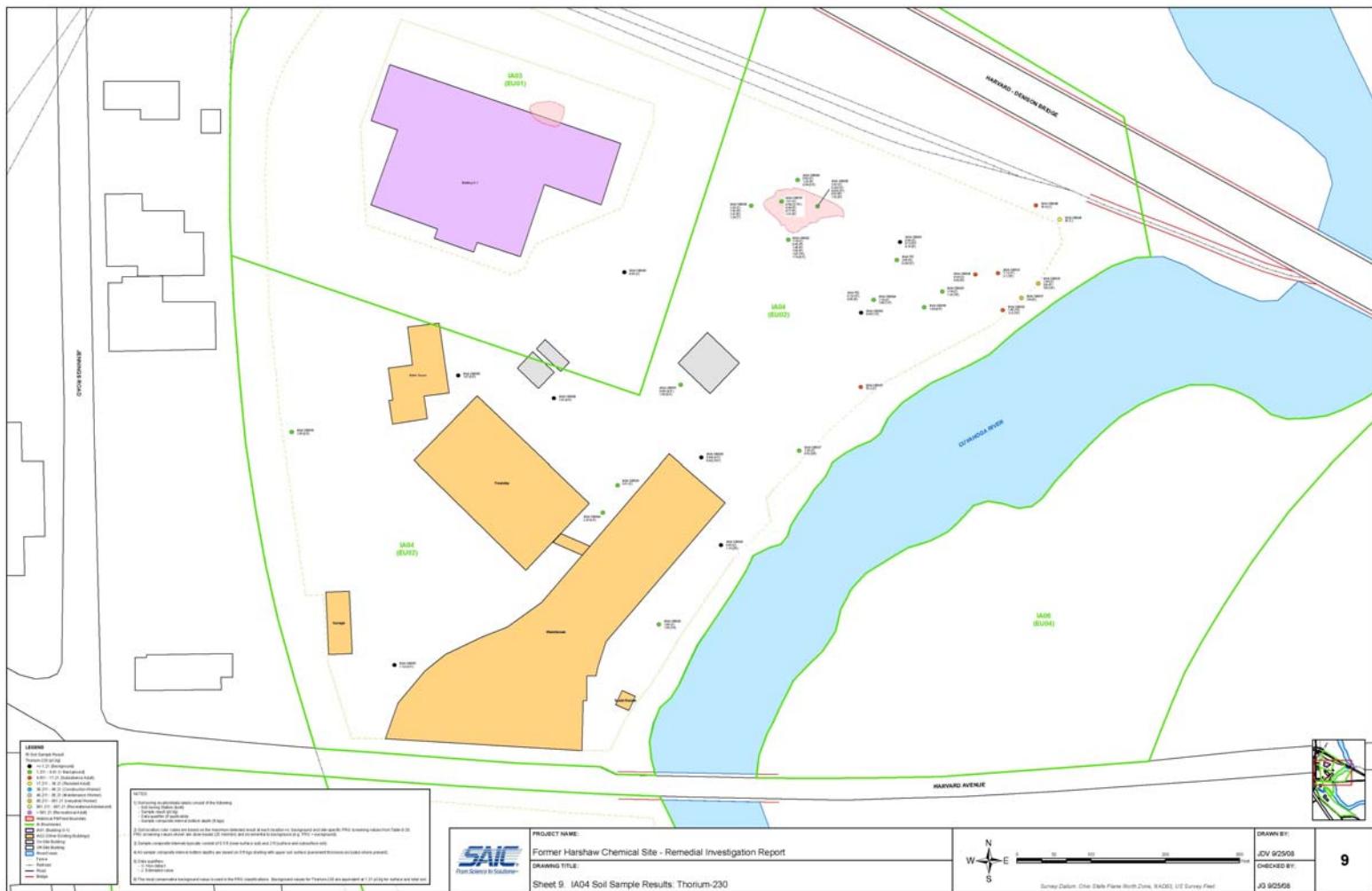


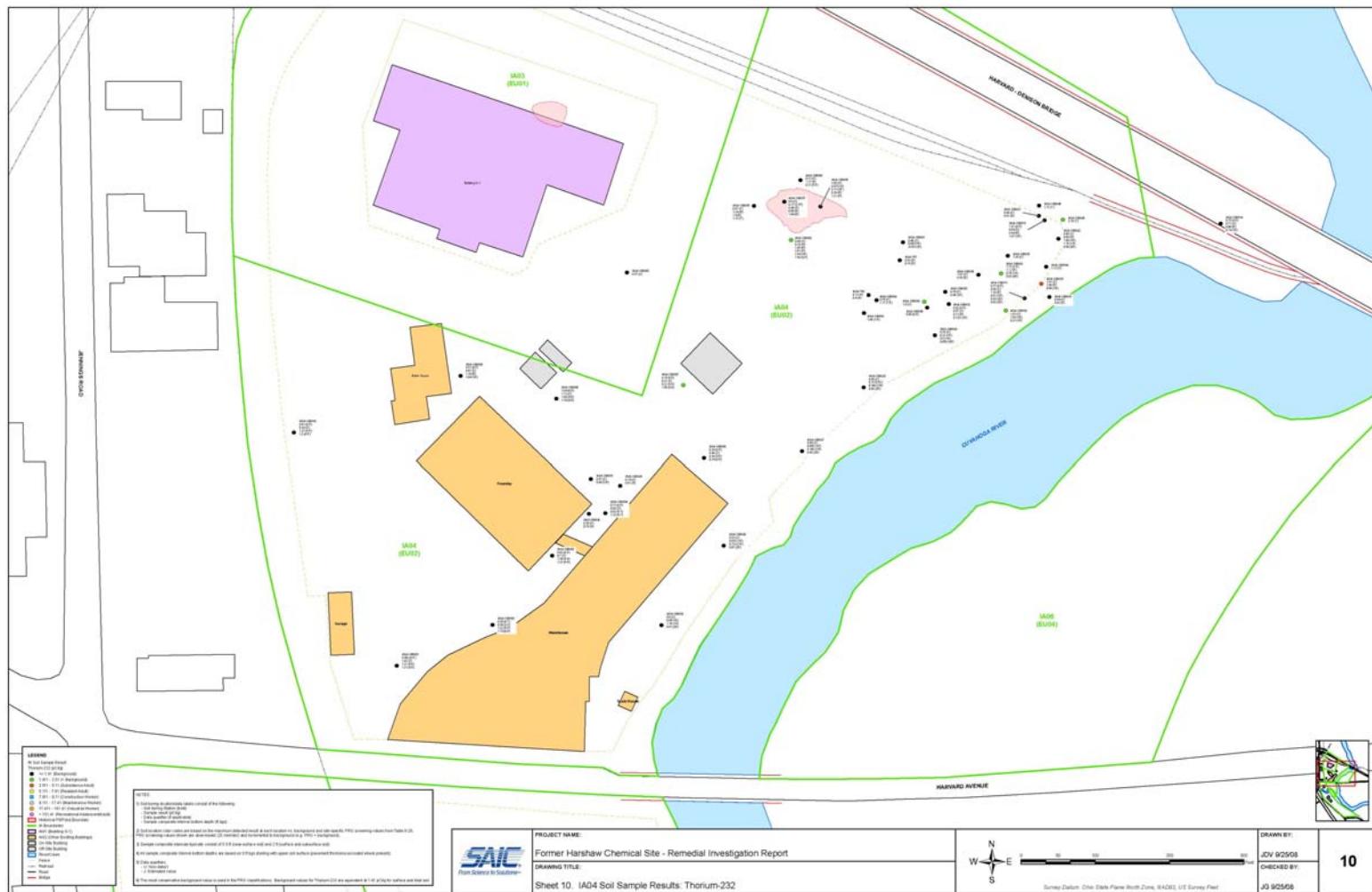


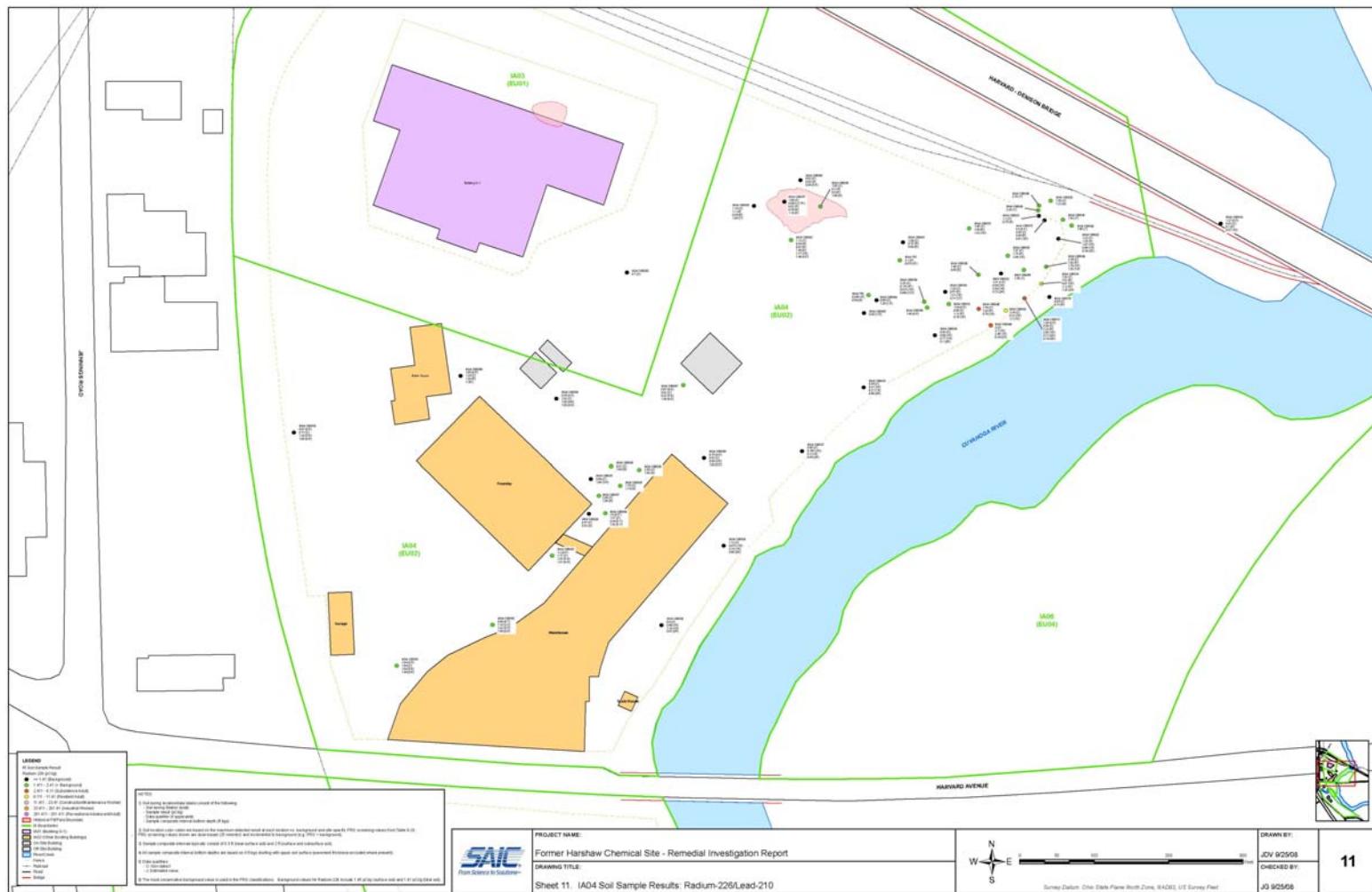


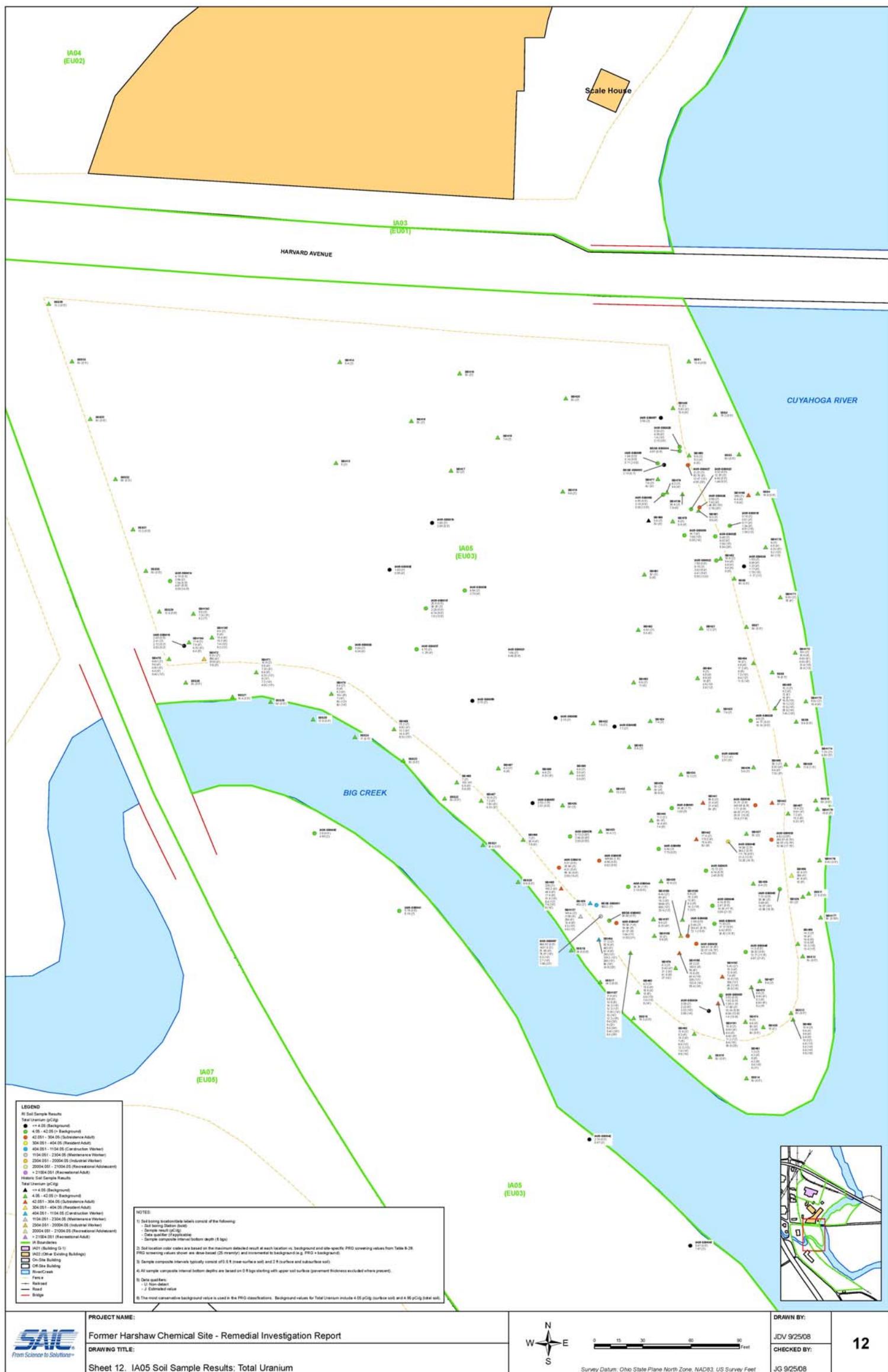


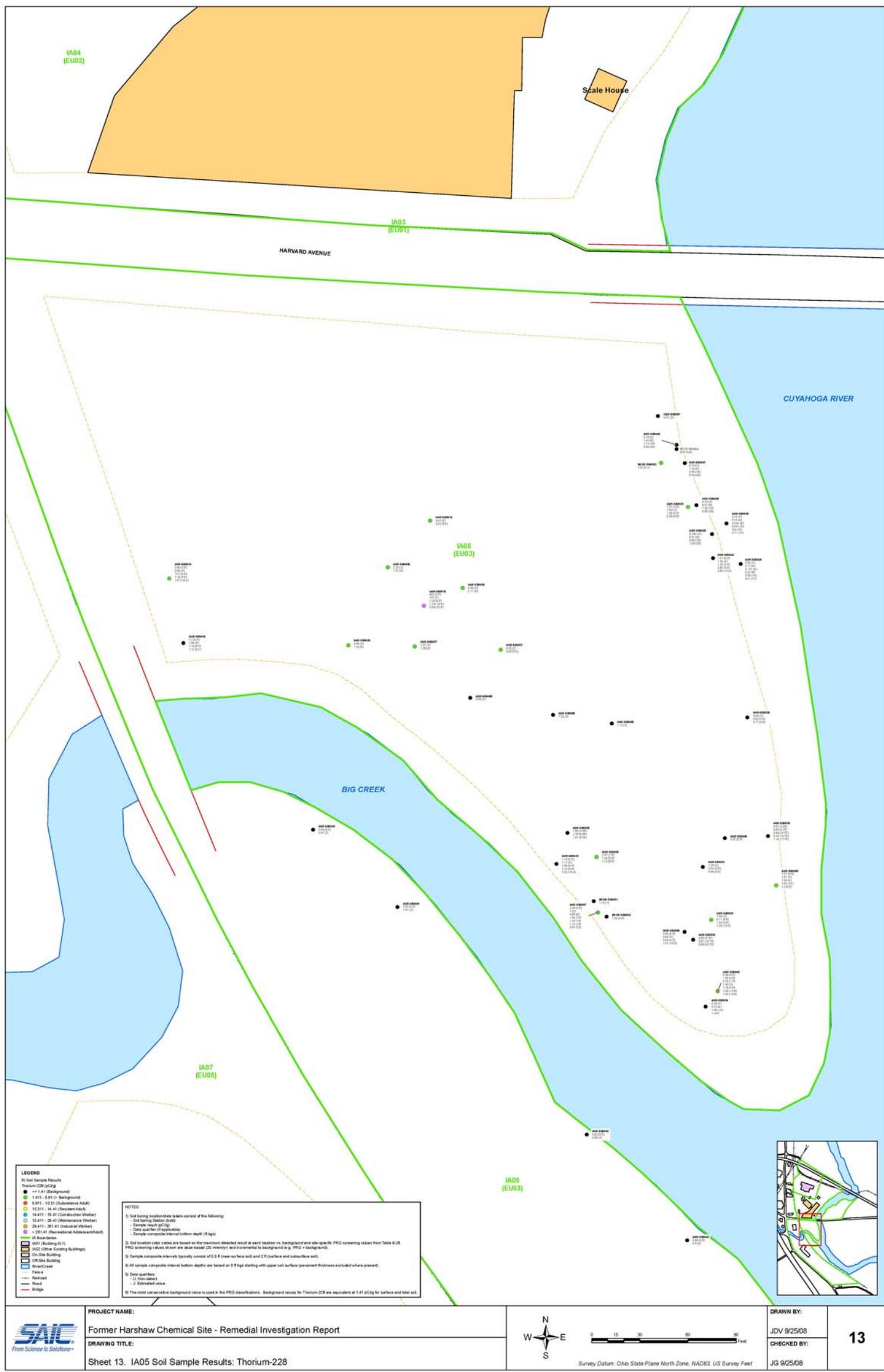




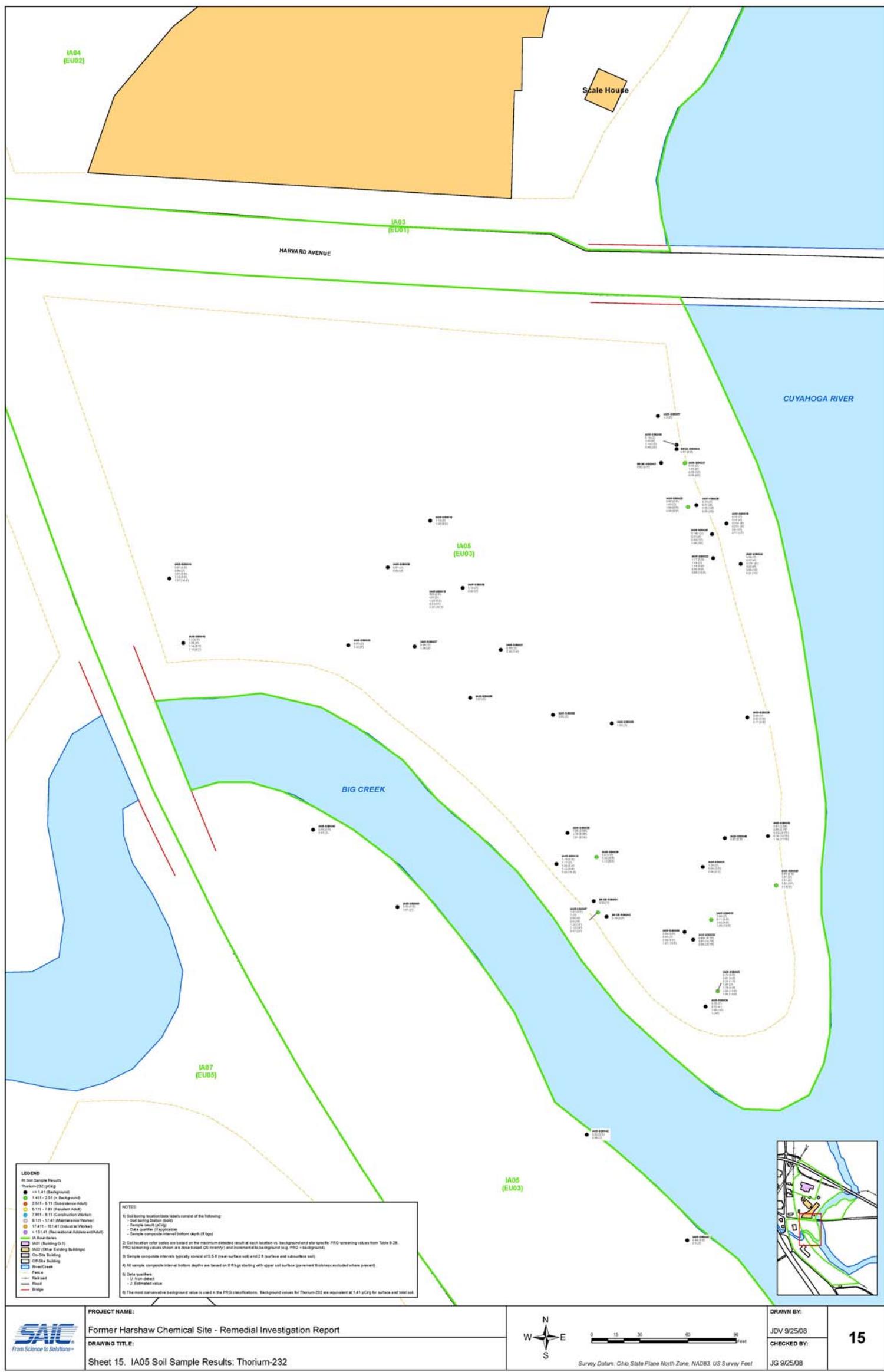


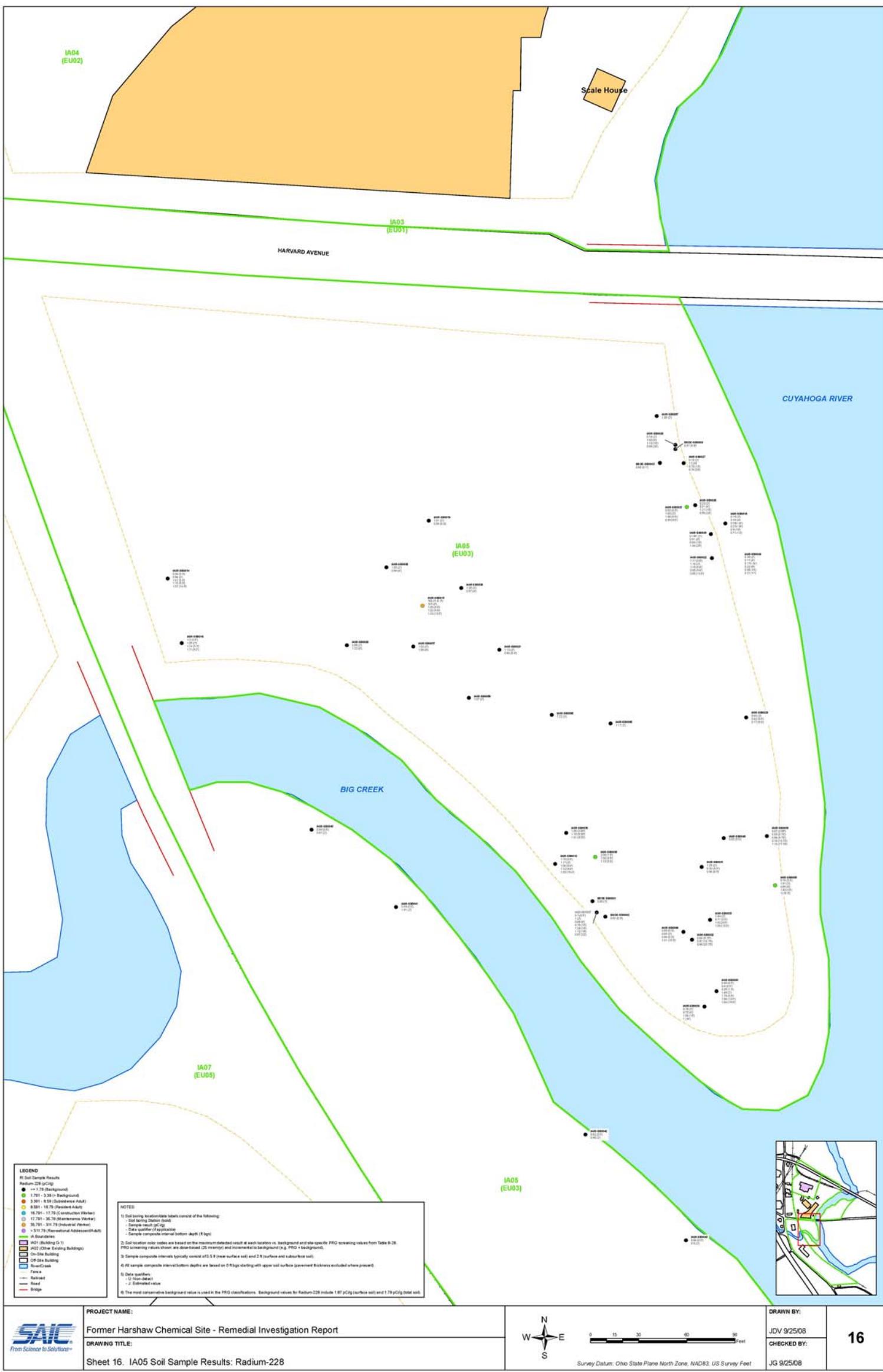


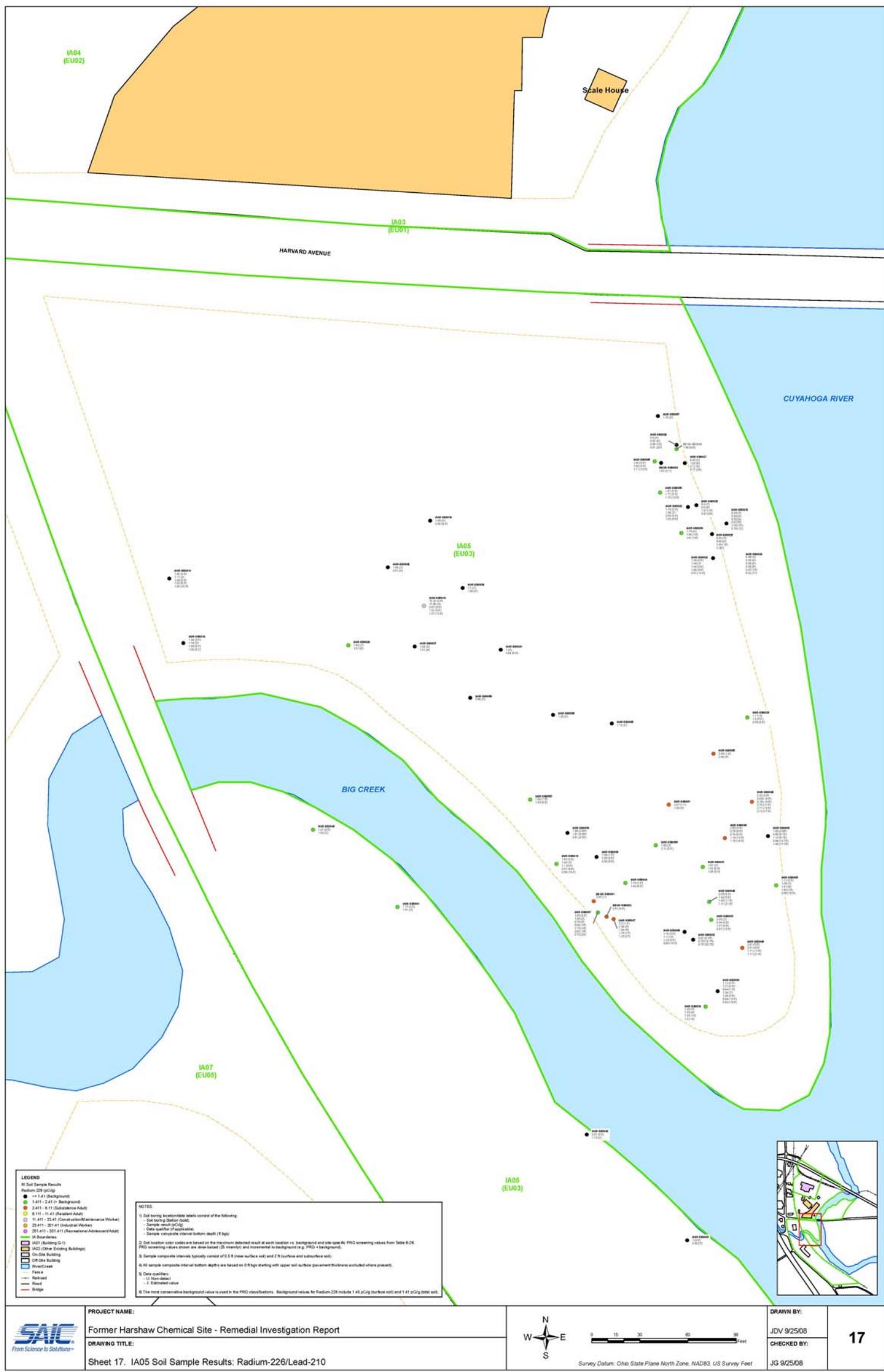


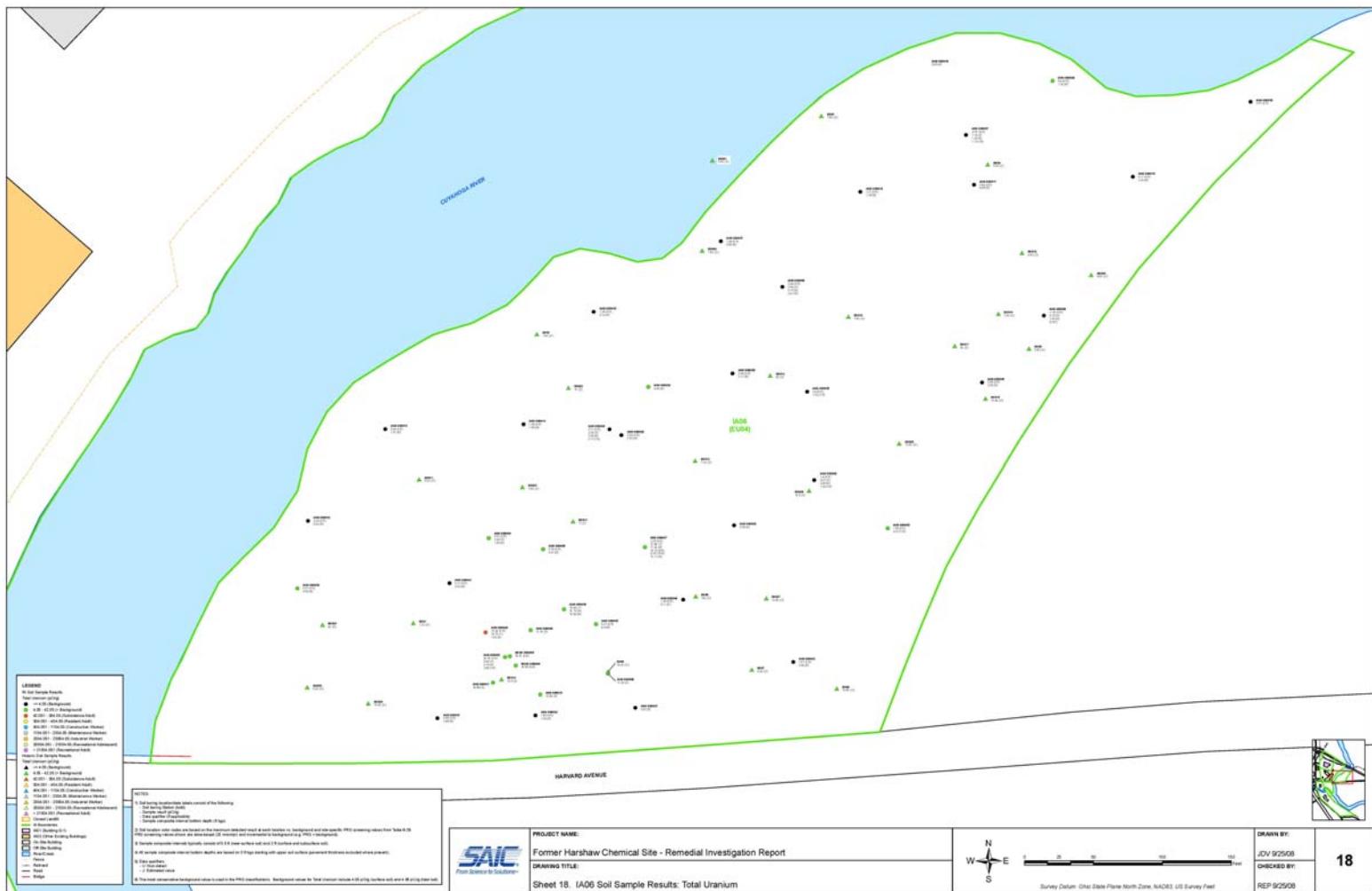


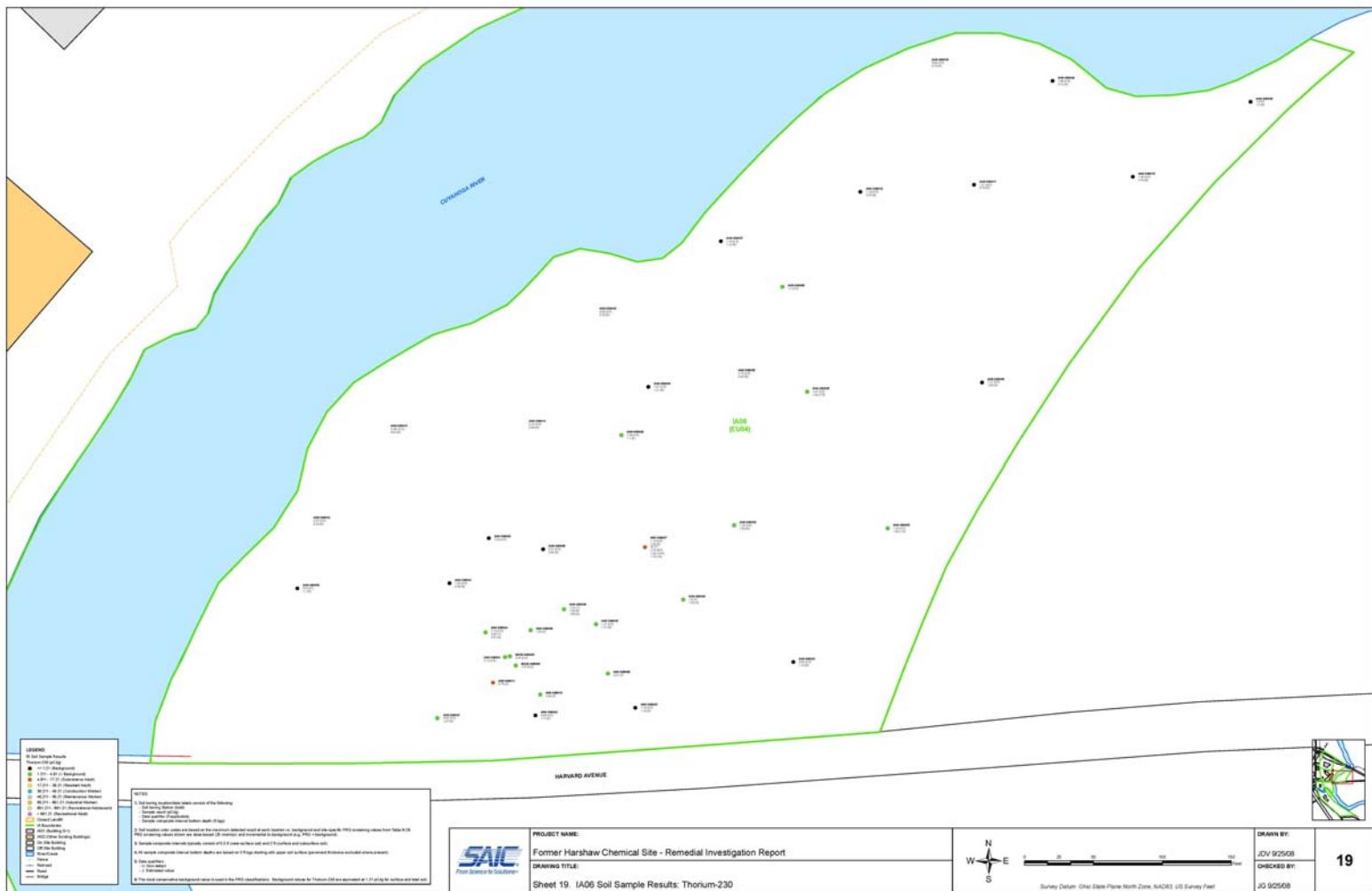


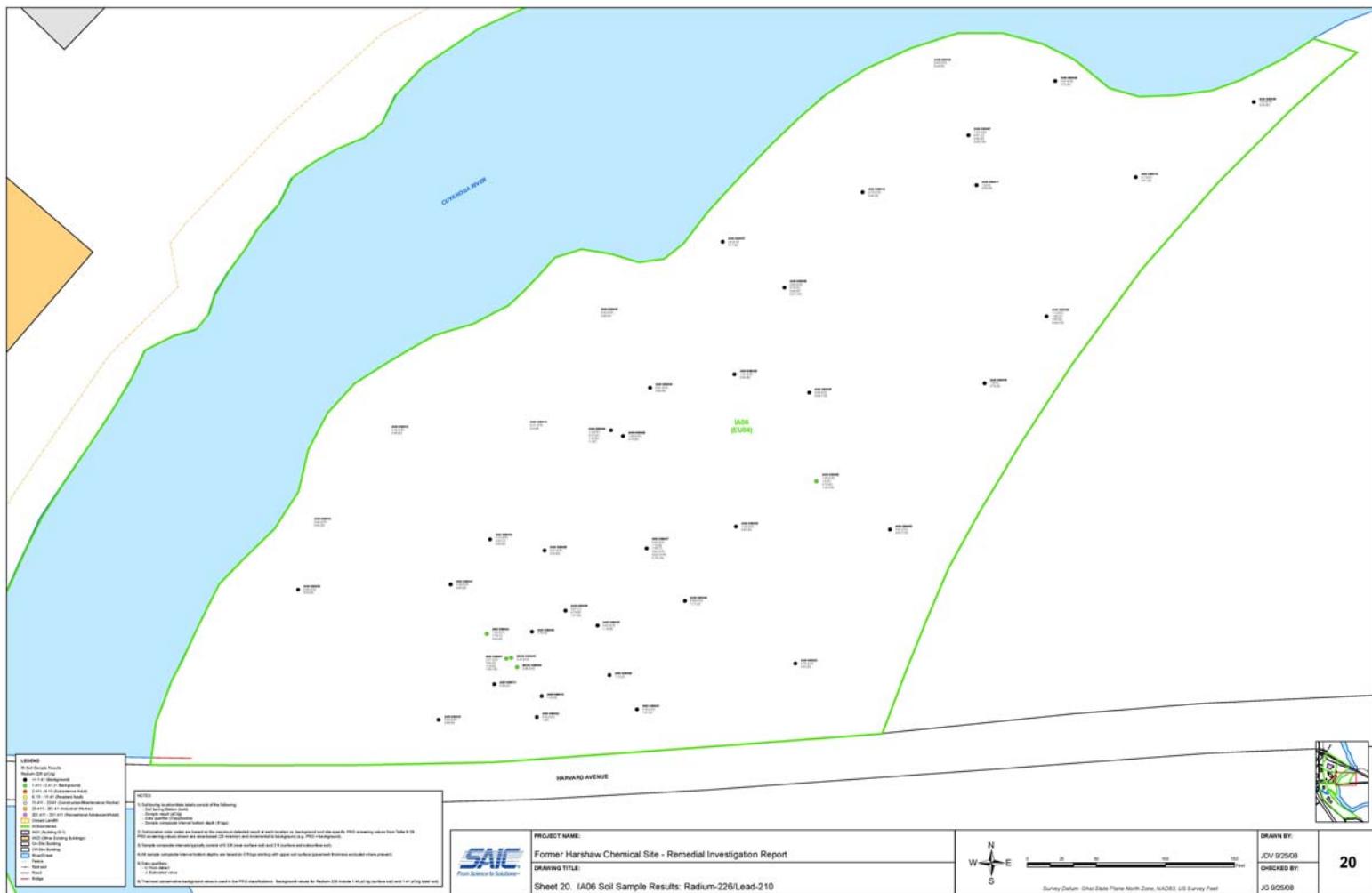


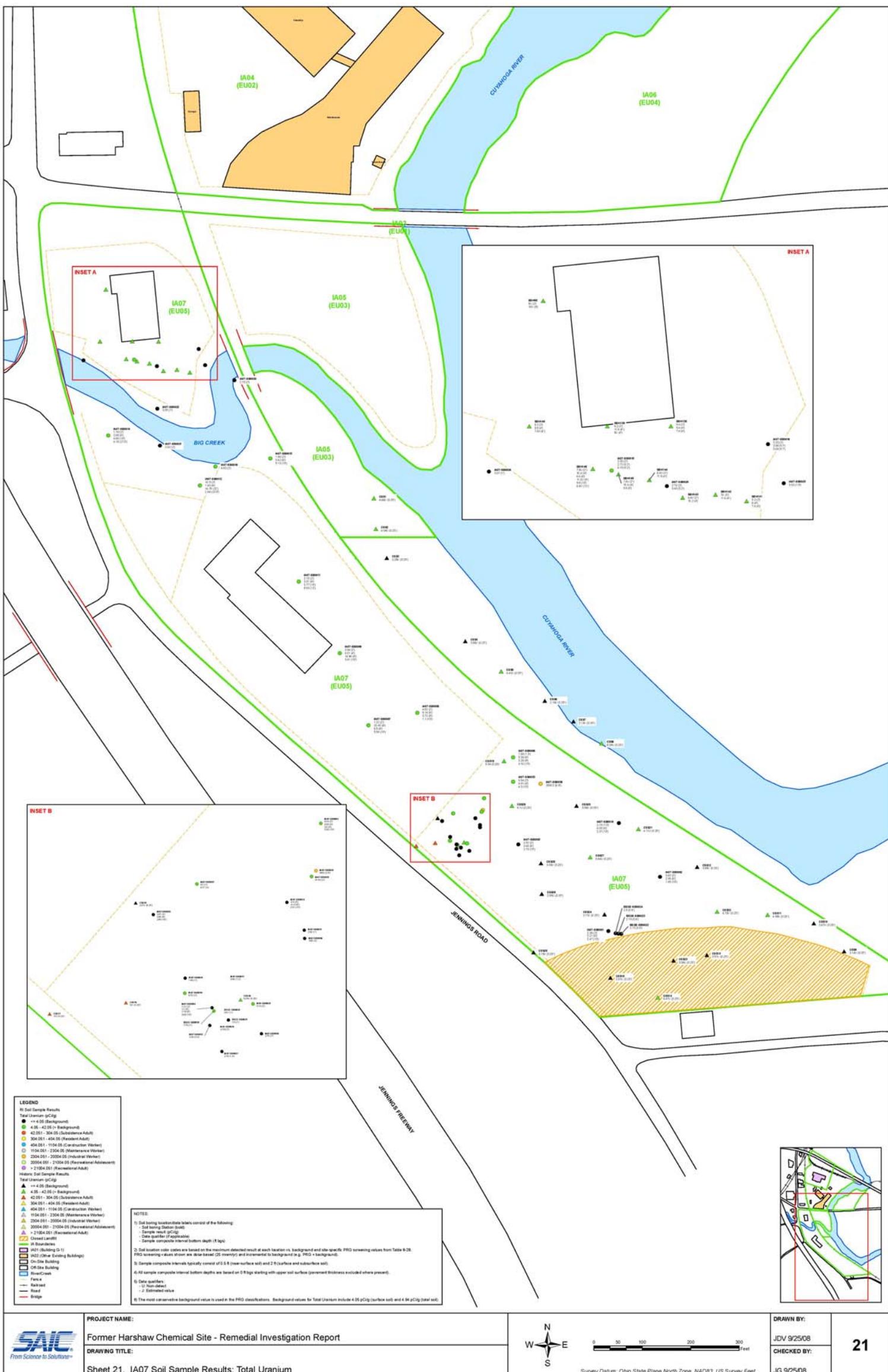






















PROJECT NAME: Former Harshaw Chemical Site - Remedial Investigation Report	DRAWING TITLE: Sheet 26. IA07 Soil Sample Results: Radium-226/Lead-210	DRAWN BY: JDV 9/25/08
DRAWING NUMBER: JG 9/25/08		CHECKED BY: JG 9/25/08

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0 50 100 200 300
Survey Datum: Ohio State Plane North Zone, NAD83, US Survey Feet

