

2010 Annual Inspection Report for the Weldon Spring, Missouri, Site

January 2011



U.S. DEPARTMENT OF
ENERGY

Legacy
Management

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2010 Annual Inspection Report for the Weldon Spring, Missouri, Site

Summary

The Weldon Spring Site, located in St. Charles, Missouri, was inspected on October 26 through 28, 2010. The inspection was conducted in accordance with the *Long-Term Surveillance and Maintenance Plan for the Weldon Spring, Missouri, Site* (LTS&M Plan) (December 2008), and associated inspection checklist. Representatives from the U.S. Department of Energy (DOE), the DOE contractor S.M. Stoller Corporation (Stoller), U.S. Environmental Protection Agency (EPA), and Missouri Department of Natural Resources (MDNR) participated in the inspection. Representatives from the Missouri Department of Transportation (MoDOT), Missouri Department of Conservation (MDC) and St. Charles County participated in portions of the inspection. The Weldon Spring Site is a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site. This inspection also served as the five-year review inspection to support the site's CERCLA Five-Year Review Report that is required to be issued in 2011.

The main areas inspected at the site were the Quarry, the disposal cell, Leachate Collection and Removal System (LCRS), monitoring wells, assorted general features, and areas where future institutional controls will be established.

Institutional control areas were inspected to ensure that pending restrictions such as excavating soil, groundwater withdrawal, residential use, etc., were not being violated. Each area was inspected and no indication of violations of future restrictions was observed.

An aerial survey of the disposal cell was flown in May 2010. This survey is required by the LTS&M Plan and checklist to be conducted every five years in conjunction with the 5-year review inspection. The previous aerial survey was conducted in 2005 in conjunction with the previous five-year review and in 2003 in conjunction with the first annual LTS&M inspection. The survey results were discussed during the inspection.

The disposal cell was inspected by walking ten transects over the cell and around the cell perimeter. Hand-held global positioning system (GPS) equipment was used to navigate the ten transects. Five areas of the cell which had been marked and located by GPS survey equipment during the 2003 annual inspection were located and observed for any signs of rock degradation. The LCRS was also inspected and found to be in good condition. Sixty-nine of the 124 groundwater-monitoring wells were inspected and generally were in good condition. Other site features including the prairie, site markers, and roads also were inspected.

1.0 Introduction

The Weldon Spring Site is in southern St. Charles County, Missouri, approximately 30 miles west of St. Louis, as shown in Figure 1. The site consists of two main areas, the Weldon Spring Chemical Plant and the Weldon Spring Quarry, both located along Missouri State Route 94.

In 1941, the U.S. Government acquired 17,232 acres (6,974 hectares) of rural land in St. Charles County to establish the Weldon Spring Ordnance Works. From 1941 to 1945, the U.S. Department of the Army (Army) manufactured trinitrotoluene (TNT) and dinitrotoluene (DNT)

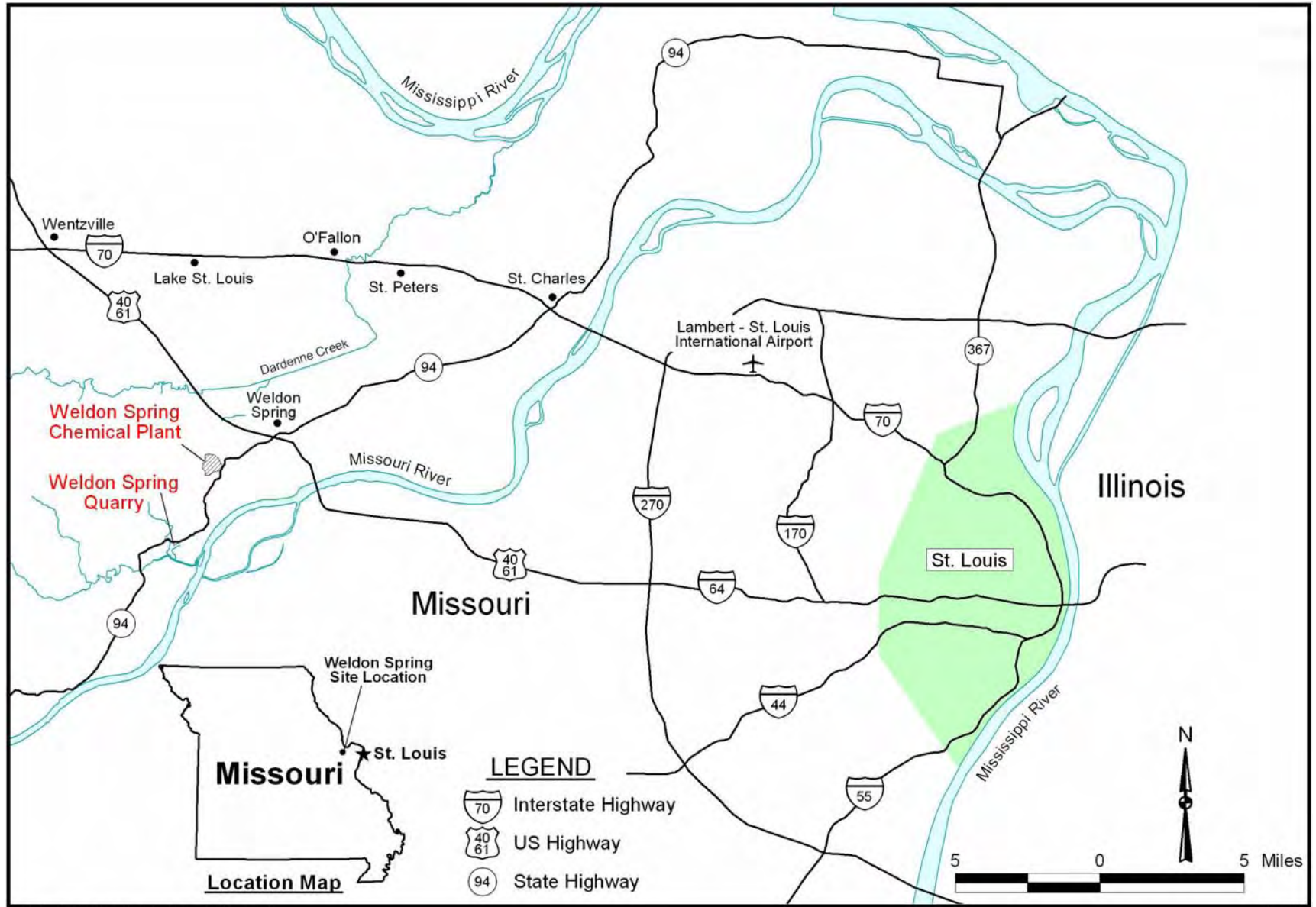


Figure 1. Location of the Weldon Spring, Missouri, Site

at the site. These operations resulted in nitroaromatic contamination of soil at the plant site, sediments in drainages originating at the site (Frog Pond Outlet and the Southeast Drainage), groundwater near the site, and some off-site springs.

The former ordnance works property was transferred to the U.S. Atomic Energy Commission (AEC) in 1956 for construction of the Weldon Spring Uranium Feed Materials Plant now referred to as the Weldon Spring Chemical Plant. The plant converted processed uranium ore concentrates to pure uranium trioxide, intermediate compounds, and uranium metal. A small amount of thorium also was processed. Wastes generated during these operations were stored in four raffinate pits located on the plant property. Uranium processing operations resulted in radiological contamination of the same locations previously contaminated by former Army operations.

The Weldon Spring Quarry was mined for limestone aggregate used in construction of the ordnance works. The Army used the Quarry for burning wastes from explosives manufacturing and disposal of TNT-contaminated rubble during the operation of the ordnance works. These activities resulted in nitroaromatic contamination of the soil and in rock fractures at the Quarry, in groundwater under the Quarry, and between the Quarry and Femme Osage Slough.

In 1960, the Army transferred the Quarry to the AEC, who used it from 1963 to 1969 as a disposal area for uranium and thorium residues from the Chemical Plant (both drummed and uncontained), contaminated building rubble, process equipment, and soils from demolition of a uranium processing facility in St. Louis. Radiological contamination occurred in the same locations as the nitroaromatic contamination.

Uranium processing operations ceased in 1966 and the Quarry and Chemical Plant areas were placed on the National Priorities List in 1987 and 1989, respectively. Remediation of the Weldon Spring site was administratively divided into four Operable Units (OUs): Quarry Bulk Waste OU, Chemical Plant OU, Quarry Residuals OU, and Groundwater OU. Records of Decision for each OU have been approved. The Southeast Drainage was remediated as an interim response action through a separate engineering evaluation/cost analysis.

The remedy for the Quarry Bulk Waste OU consisted of excavating and removing bulk waste from the Quarry and transporting it along a dedicated haul road to an engineered temporary storage area located at the Chemical Plant. The Chemical Plant OU remedy included removal of contaminated soils, sludge, and sediment, treatment of wastes as appropriate by chemical stabilization/solidification and disposal of the Chemical Plant and Quarry bulk wastes in an engineered on-site disposal facility. The Quarry Residuals OU addressed residual soil contamination in the Quarry proper, surface water and sediments in the Femme Osage Slough, and contaminated groundwater. The Groundwater OU addresses the groundwater at the Chemical Plant area. The Southeast Drainage was remediated by removal of selected sediment in accessible areas of the drainage.

The final site conditions from the above remedial actions include the following:

- An on-site disposal cell contains 1.48 million cubic yards of contaminated material.
- Residual groundwater contamination remains in the shallow aquifer beneath both the Chemical Plant and Quarry.

- Several springs near the Chemical Plant area discharge residually contaminated groundwater.
- Residual soil and sediment contamination remain in the Southeast Drainage.
- Contamination remains at two culverts, one along Missouri State Route 94 and one along Highway D.
- Residual soil contamination remains at inaccessible locations within the Quarry.

The purposes of the annual inspection were to confirm the integrity of the visible features (such as disposal cell, LCRS, and monitoring wells) at the site, document the site condition subsequent to remediation and restoration, identify changes in conditions that may affect site integrity, determine if institutional controls are adequately implemented, and determine the need, if any, for maintenance or additional inspections and monitoring.

At the time of the inspection nine personnel from the Stoller office in Grand Junction, Colorado, were employed full-time at the site. Some of these employees also support other Legacy Management sites around the nation. Also employed at the site were nine part-time contractor and subcontractor employees.

This report presents the results of the DOE annual inspection of the Weldon Spring Site. The following personnel from Stoller were the lead inspectors during the inspection:

Terri Uhlmeier, Weldon Spring Site
Randy Thompson, Weldon Spring Site

The following support personnel from Stoller participated in the inspection:

Tom Welton, Weldon Spring Site
Tim Zirbes, Weldon Spring Site
Becky Cato, Weldon Spring Site

The following personnel observed the inspection and provided oversight:

Vijendra Kothari – DOE
Jane Powell – DOE
Hoai Tran – EPA, Region VII
Patrick Anderson – MDNR
Hannah Humphrey – MDNR
Kevin Wideman – MoDOT
John Vogel – MDC
Pieter Sheehan – St. Charles County Health
Ryan Tilley – St. Charles County Health
Yvonne Deyo - Stoller

The inspection was conducted in accordance with the LTS&M Plan, dated December 2008.

2.0 Inspection Results

Prior to the inspection, the site inspection agenda (Appendix A) was reviewed with the inspection participants. A safety briefing was also held prior to the inspection and the corrective action report from the 2009 annual inspection was reviewed (Appendix B). Following is a summary of the inspection results. The inspection base map, which includes the locations of the photographs, is included as Figures 2 and 3. The checklist (from Appendix H of the LTS&M Plan) is included in this report as Appendix C.

2.1 Institutional Controls (ICs) Inspection

Section 2.3.4 of the LTS&M Plan states “DOE will conduct a formal annual inspection of the physical locations addressed by ICs. DOE also will evaluate whether the ICs remain effective in protecting human health and the environment and, in coordination with EPA and MDNR, will take appropriate action if evidence indicates the controls are not effective.”

The Weldon Spring Site has made progress on the attainment of the instruments for institutional controls, although some are still pending and not yet formally in place. The institutional controls attained during 2009 were the signed revised Memorandum of Understanding with the Army to specify the groundwater use restrictions contained in the Explanation of Significant Difference (ESD) and to further enhance DOE’s access for the purpose of environmental monitoring and for surveillance of the restricted area and an easement on the MDNR-Parks property to implement the groundwater use restriction on that property. The institutional controls that are in place prior to 2009 include a Notation of Land Ownership on the Chemical Plant and Quarry Property which is filed with St. Charles County; the interpretive center; a license granting DOE permission to abandon or install and operate groundwater wells and perform sampling; and a license granting DOE continued operation and maintenance of the effluent discharge pipeline that runs from DOE property to the Missouri River and through the Katy Trail. The “Special Use Area” under the Missouri Well Code was finalized in the Missouri regulations in August 2007. This is a special regulation that designated the DOE and Army’s groundwater restricted areas as special areas that require additional drilling protocols and construction specifications to be imposed by MDNR on any future domestic wells. The final LTS&M also lists the following additional ICs that DOE has been pursuing:

DOE will negotiate with the surrounding affected State agency property owners (Missouri Department of Conservation and Missouri Department of Transportation) to acquire easements that implement the groundwater and land use restrictions contained in the ESD, and to further enhance DOE’s access for the purpose of environmental monitoring and for surveillance of the restricted area.

During the inspection, the final and pending institutional control areas were inspected in accordance with the current information in the LTS&M Plan. Figures 4 and 5 are the institutional control location maps from the LTS&M Plan.

The institutional control areas are listed below as they are stated in the inspection checklist.

2.1.1 Land and Shallow Groundwater Use Within the Site Proper Boundary (Outside Disposal Cell Buffer Zone)

Inspect for indications of excavations into soil or bedrock and groundwater withdrawal or use in restricted areas. If any party has been granted use of portions of the Chemical Plant area, inspect to ensure that land use is in compliance with the terms of the restrictions within the notation.

Inspection Results: This area was inspected and no indications of excavations into soil or bedrock, groundwater withdrawal, or use were observed. Lindenwood University has been granted use of the Administration Building and its use is consistent with the agreement. Current land use remains consistent with the planned institutional controls.

2.1.2 Land and Shallow Groundwater Use at DOE Site Proper Disposal Cell and Buffer Zone

Inspect for indications of excavations into soils and bedrock, and for residential use of the shallow groundwater within the buffer zone. Inspect to ensure that the land use continues to be in compliance with the terms of the restrictions within the notation.

Inspection Results: This area was inspected and no indications of excavations into soils and bedrock, and no residential use of the shallow groundwater within the buffer zone were observed. Current land use remains consistent with planned institutional controls.

2.1.3 Groundwater Use in Areas Surrounding the Chemical Plant

Groundwater use will be restricted in this area. Inspect affected areas for evidence of groundwater or spring water use (Burgermeister Spring and Spring 6303). Inspect to ensure that land use continues to be in compliance with the terms of the license, easement, or permit and the restrictions contained therein.

Inspection Results: The surrounding area where groundwater use will be restricted was inspected. This includes property owned by the Missouri Department of Conservation (MDC) and the Army. No evidence of groundwater use was observed and current land use remains consistent with planned institutional controls on both properties. Burgermeister Spring 6301 (Photo 1) and Spring 6303 on MDC property were inspected and there were no indications of spring water use. Spring 6303 was not flowing. On the Army property, survey monument WS46, was inspected. The Chemical Plant groundwater restriction area boundary monuments are shown in Figure 4. All the monitoring wells inspected were locked. There were some monitoring wells that needed the contact label replaced and some that needed painting. One well had two bollards that were loose. The Army is constructing a new reserve center outside its fence line and has plans to build a larger center inside the fence in the next few years. The boundary monument WS90 was located and it was noted that it had been broken and needs repaired.

2.1.4 Land and Shallow Groundwater Use on the DOE Quarry Property

Inspect for indications of excavations into soil or bedrock and groundwater withdrawal or use in restricted areas. If any party had been granted use of portions of the Quarry area, inspect to ensure that land use is in compliance with the terms of the restrictions within the notation.

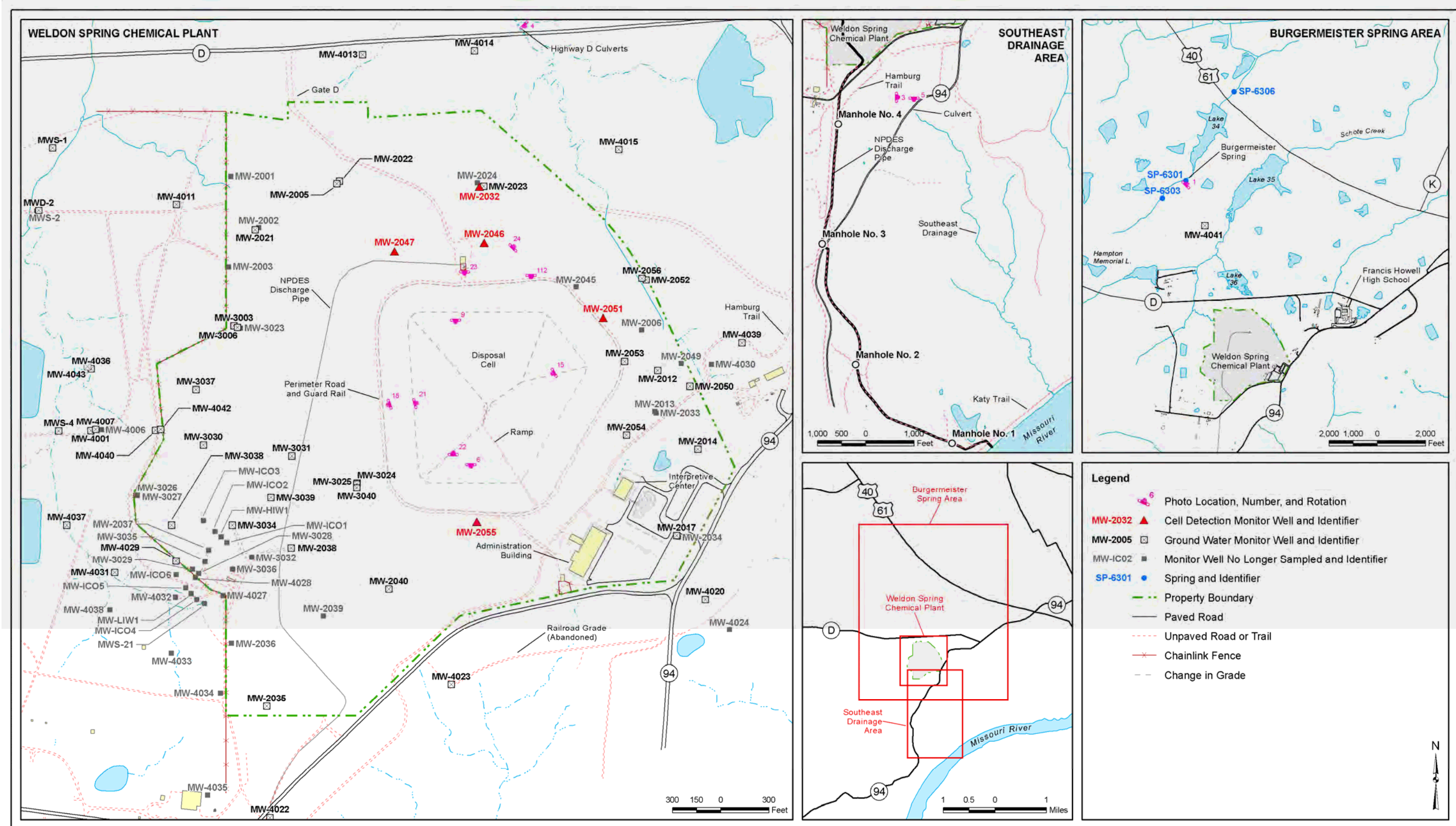


Figure 2. 2010 Inspection Map for the Chemical Plant Area of the Weldon Spring, Missouri, Site

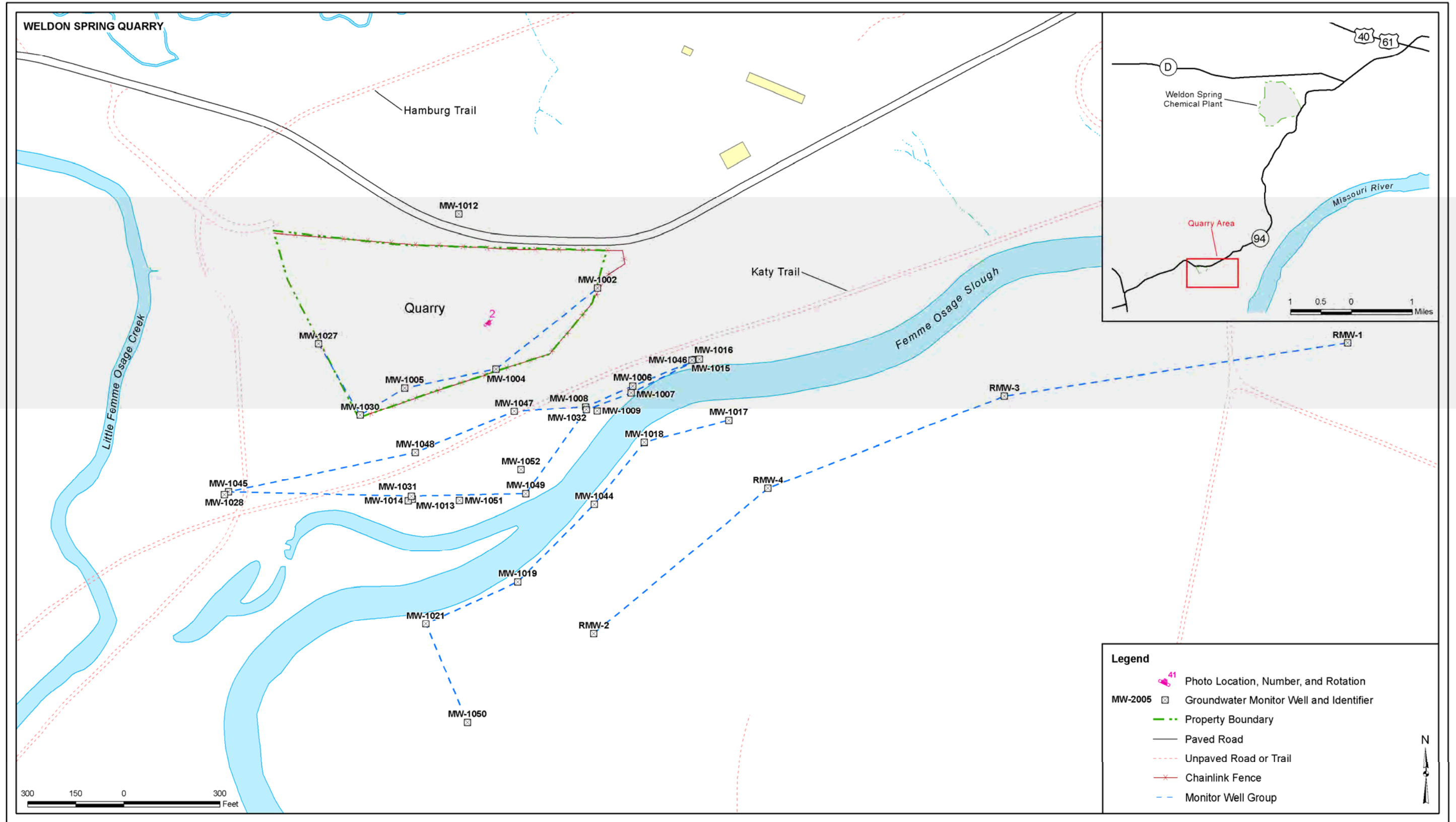


Figure 3. 2010 Inspection Map for the Quarry Area of the Weldon Spring, Missouri, Site

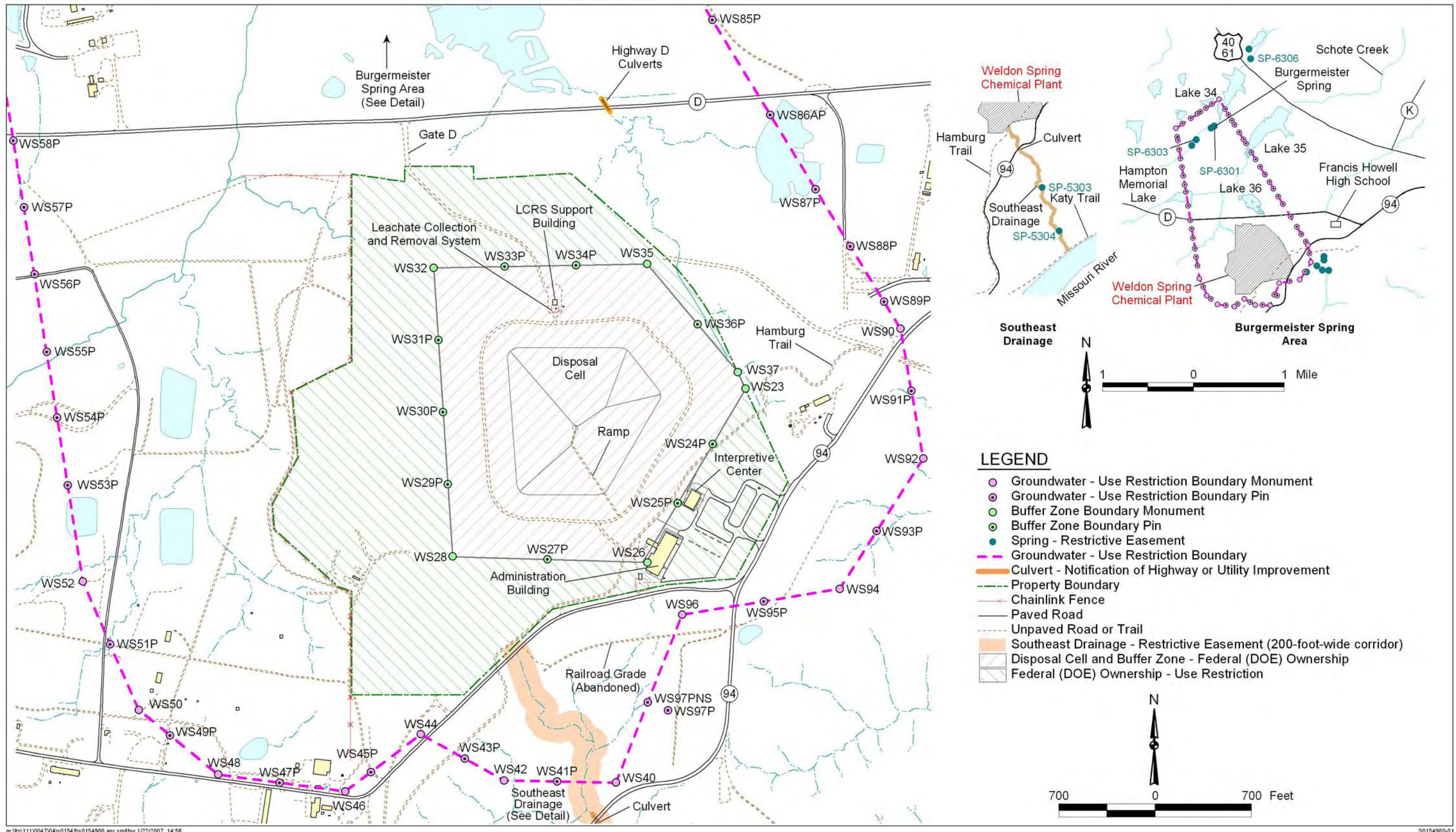


Figure 4. Institutional Controls Location Map for the Chemical Plant Area of the Weldon Spring, Missouri, Site

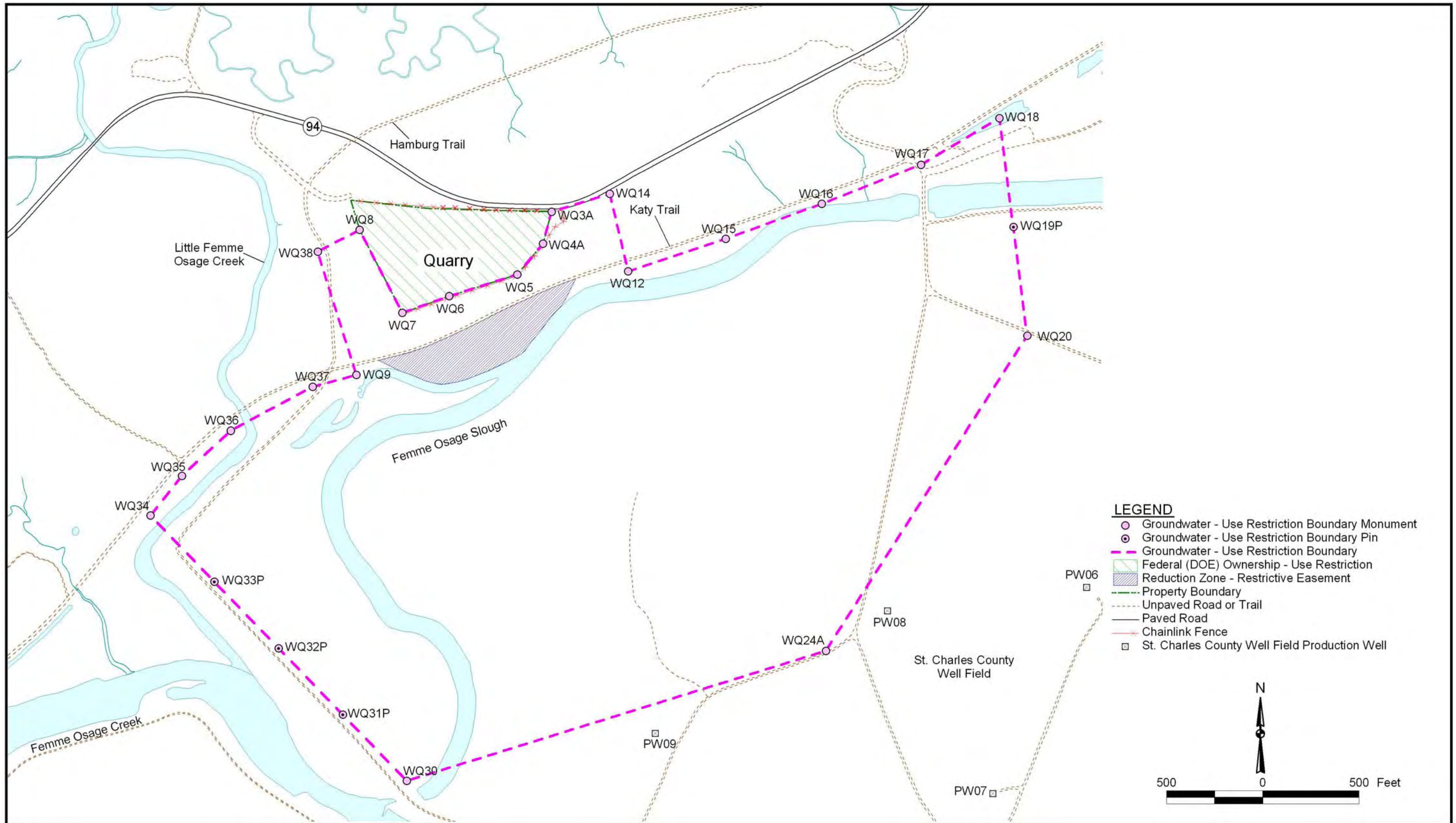


Figure 5. Institutional Controls Map for the Quarry Area of the Weldon Spring, Missouri, Site

Inspection Results: The Quarry Property was inspected and no indications of excavation into soil or bedrock, groundwater withdrawal, or use were observed. Also, no party has been granted use of portions of the Quarry area. Quarry backfill continues to provide positive drainage from the Quarry to the Little Femme Osage Creek and vegetative cover remains well established (Photo 2). Current land use remains consistent with planned institutional controls.

2.1.5 Groundwater (Quarry)

Groundwater use is restricted in certain areas. Inspect affected areas for evidence of groundwater withdrawal or use in the area of impact. Inspect to ensure that land use continues to be in compliance with the terms of the license and the restrictions contained therein.

Inspection Results: The groundwater-restricted area was inspected and no evidence of groundwater withdrawal or use in the area was observed. The Quarry groundwater restriction area boundary survey monuments are shown in Figure 5. The following survey monuments were located during the inspection: WQ7, WQ8, WQ10, WQ11, and WQ12. It was noted that WQ12 needs to be restamped.

2.1.6 Land Use in Quarry Area Reduction Zone

A naturally occurring reduction zone exists in soil south of the Katy Trail and north of the Femme Osage Slough. Inspect for indications of excavations into soils and bedrock in the uranium reduction zone. Inspect to ensure that land use continues to be in compliance with the terms of the easement and the restrictions contained therein.

Inspection Results: The Quarry reduction zone area was inspected and no indications of excavation into soils and bedrock were observed. As required by the final LTS&M Plan, information signage and contact numbers were posted on monitoring wells at the Quarry Area reduction zone. The labels indicate no digging is allowed in this area and include contact numbers for DOE and MDC. Land use remains consistent with planned institutional controls.

2.1.7 Southeast Drainage

Check for indications of residential use or construction in the Southeast Drainage (200-foot-wide-corridor), or other activity that would indicate non-recreational use of the area. Check Springs 5303 and 5304 for residential, commercial, or agricultural use of spring water.

Inspection Results: The inspectors walked down the entire Southeast Drainage (Photo 3) and no indications of residential use, construction, or any other activity that would indicate non-recreational use of the area were observed. The springs also were inspected and no indications of residential, commercial, or agricultural use of the springs were observed. Both of the springs were observed to be flowing. Current land use remains consistent with planned institutional controls.

2.1.8 Highway D Culvert

Check for signs of disturbance of the affected region where the Frog Pond outlet culverts pass beneath Highway D and in the utility rights-of-way in the affected area.

Inspection Results: The Highway D culverts were inspected (Photo 4). No disturbance or changes were noted. It was noted that MoDOT plans to widen the shoulders on Hwy. D next spring, therefore, DOE has agreed to work with MoDOT and assist in removing the contaminated culverts and soil in this area. Coordination is underway regarding this activity.

2.1.9 State Route 94 Culvert

Check for signs of disturbance of the affected region where the culvert passes beneath State Route 94 and in the utility rights-of-way in the affected area.

Inspection Results: The State Route 94 culvert was inspected and it was noted that Stoller representatives had cut off a portion of the culvert (Photo 5) in August 2010 at the request of MoDOT. The culvert pieces that were removed are stored in a container in a Conex box behind the LCRS building.

2.1.10 Pipeline from LCRS to Missouri River

Inspect the entire length of the pipeline and outfall for any disturbance or maintenance needs.

Inspection Results: The area of the pipeline was inspected. GPS surveying equipment was used to find the locations of the manholes and cleanouts. A map of the pipeline, indicating the manhole locations, is shown in Figure 6. It was noted that there were no on-site disturbances of the pipeline and there were no apparent disturbances in the area of the pipeline or manholes in the off-site areas.

2.2 Disposal Cell

The disposal cell was inspected in accordance with the LTS&M Plan (Photo 6) and the annual inspection checklist. The cell was divided into ten transects (Figure 7). The inspectors separated into two groups and walked five transects each. The inspectors looked for depressions, shifts of cell plane vertices, and other indications of settlement. Other items for inspection were vegetation, wet areas, apron drains, guardrail, and the stairs. A GPS unit was used during the 2003 inspection to map five areas chosen for rock degradation review (Figure 7). The inspectors took photographs of these and compared them to photographs from the previous inspection of the same areas and observed no rock degradation. These areas are shown from the original inspection in 2003, last year, and this year for comparison in Photos 7 through 21. It was noted that some rocks had been removed from the Test Plot #5. Rocks had also been displaced along Transect 5 to make a small hole (Photo 22). It was recommended during the inspection that the site place signs on the disposal cell stating that video surveillance is being conducted.

In accordance with the checklist the inspectors also checked for wet areas or water drainage and observed that none were present. The toe and apron drains were inspected and found to be functioning as designed. The guardrail and stairs were in good condition. No vegetation was found on the disposal cell during the inspection. It has been observed the past two years that much of the rock is darker than in previous years and is assumed to be due to weathering. The darkened rock is not an issue that could compromise the disposal cell, just an observation of a changed condition.

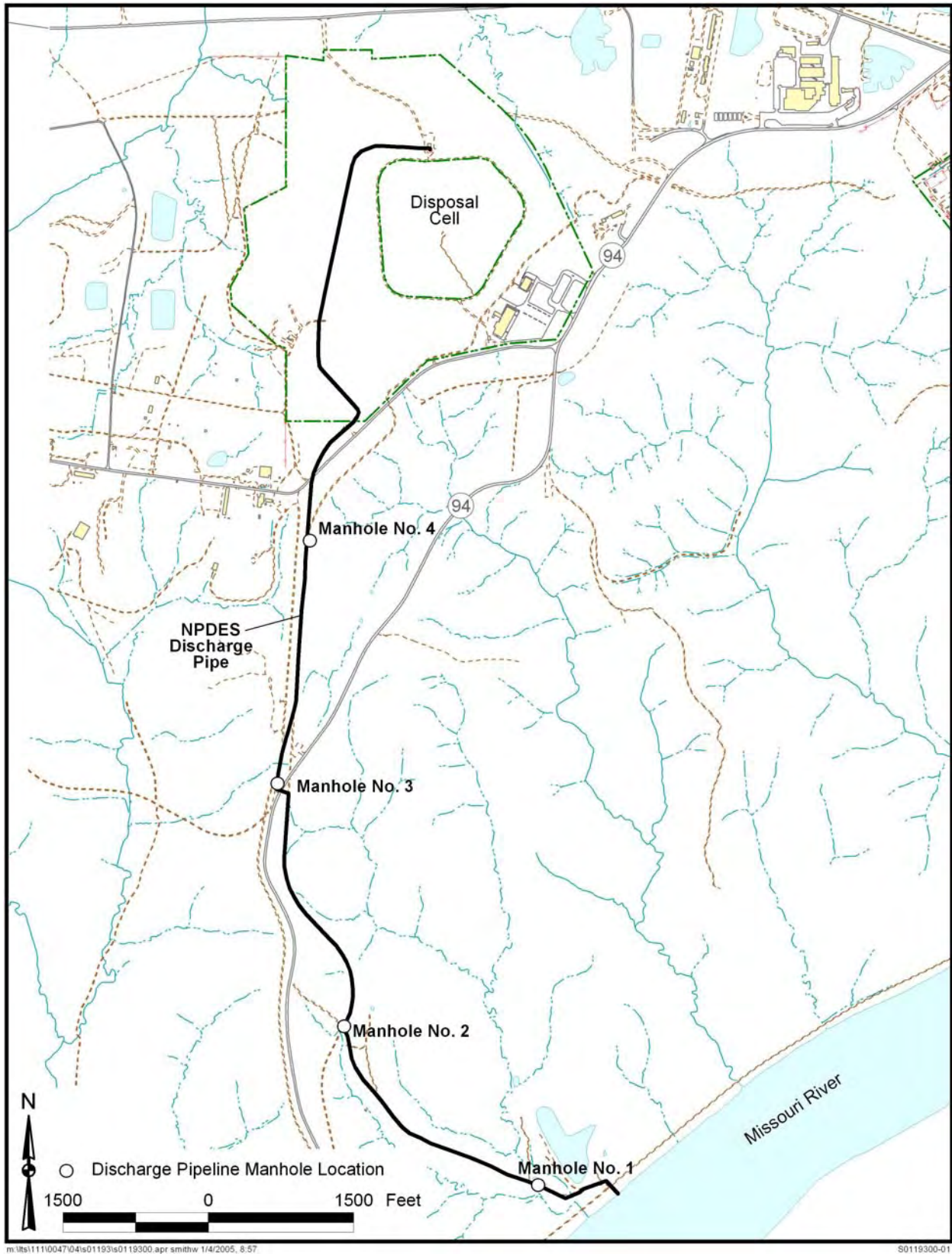
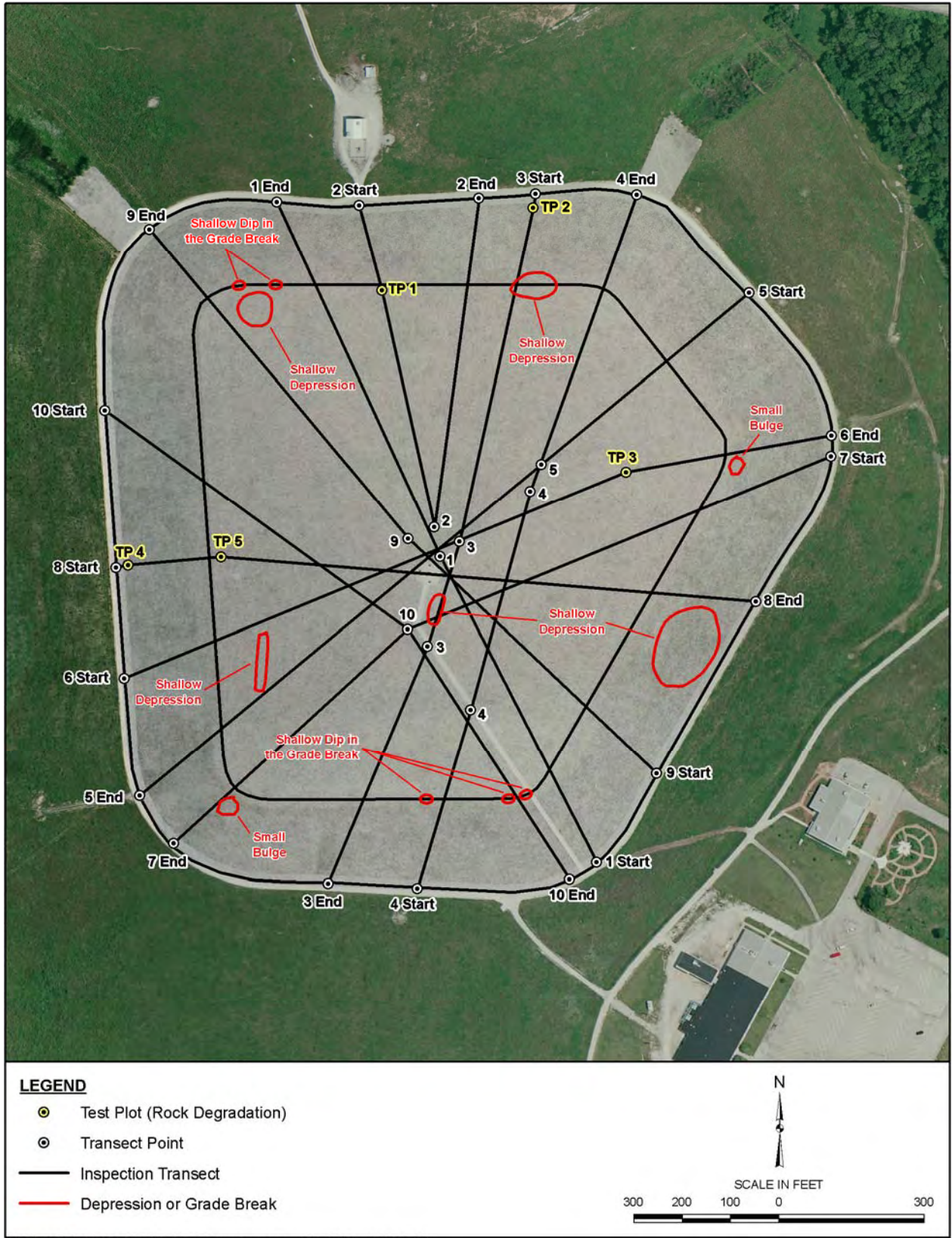


Figure 6. NPDES Discharge Pipeline Between the LCRS Support Building at the Missouri River, Weldon Spring, Missouri, Site



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Figure 7. Disposal Cell Inspection Transects and Rock Test Plot Locations at the Weldon Spring, Missouri, Site

Aerial surveys are required by the LTS&M Plan to be performed in conjunction with the CERCLA five-year reviews. The survey is required to be conducted with a vertical resolution no less precise than 0.5 feet and map and survey data to be produced with the cell surface represented by 1.0-foot contour intervals. The data are reviewed for indications of possible settlement. The first survey was performed in 2003 as a baseline and subsequent surveys were performed in 2005 and 2010, in conjunction with the CERLCA Five-Year reviews.

A comparison on the baseline topography from 2003 to the 2010 topography indicates general uniform settlement in the cell no more than 2 ft (Figure 8). The side slopes are stable showing no evidence bulging or slumping.

2.3 Leachate Collection and Removal System (LCRS)

Operations of the LCRS were discussed with site personnel and the system was inspected (Photo 23). The fences and doors were locked and in good condition. The system was functioning as designed. The LCRS data and documentation were reviewed during the document review period of the inspection and the following information was checked and verified that it was available: sampling data, LCRS flow rates, action leakage rate information, “burrito” system flow rates, and leachate data. As required by the LTS&M Plan, the leachate production rates, analytical results, and disposal information are provided in Appendix D.

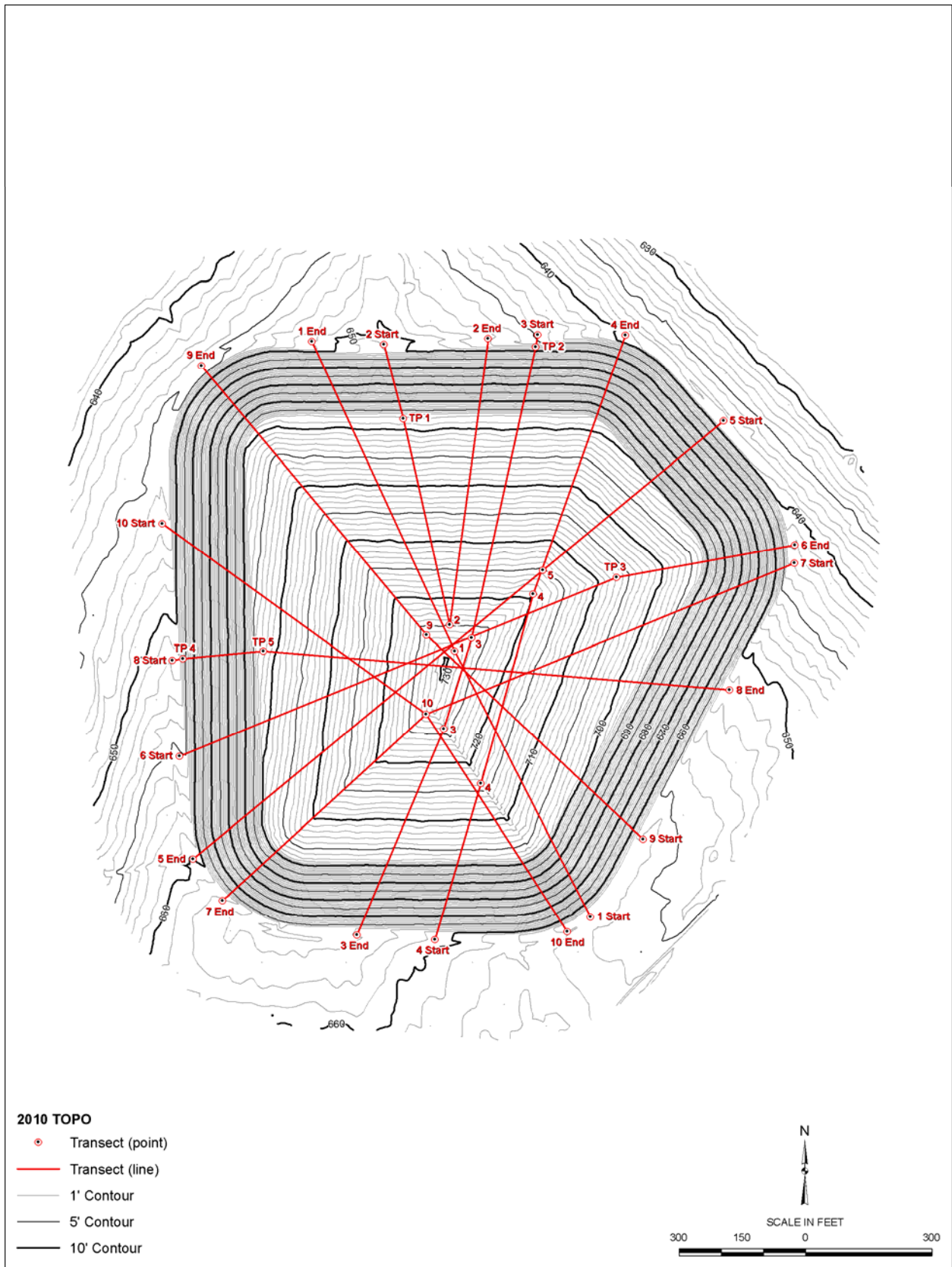
The DOE continues to exercise its pretreatment contingency process equipment by pretreating the leachate through a system of cartridge filters and ion exchange media that is selective for uranium. The leachate is sampled and continues to be well below the limit for uranium. The leachate will continue to be managed in this manner until the leachate is consistently below the 20 picoCuries per liter (pCi/L) level for uranium.

The ion exchange vessel has been labeled as “Potential Internal Contamination” based on the potential for uranium to accumulate in the resin.

2.4 Erosion

2.4.1 Chemical Plant Area

Areas of erosion in the prairie were identified during the 2006 inspection and it was recommended that the prairie be inspected more thoroughly, the erosion areas be located and mapped by GPS, and that erosion areas be repaired. Erosion channels within the entire prairie were mapped with GPS in August 2007 and again in June 2008, June 2009, and May 2010 (Figure 9). The resulting information will be used to track the nature and extent of erosion in the future.



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Figure 8. Aerial Survey

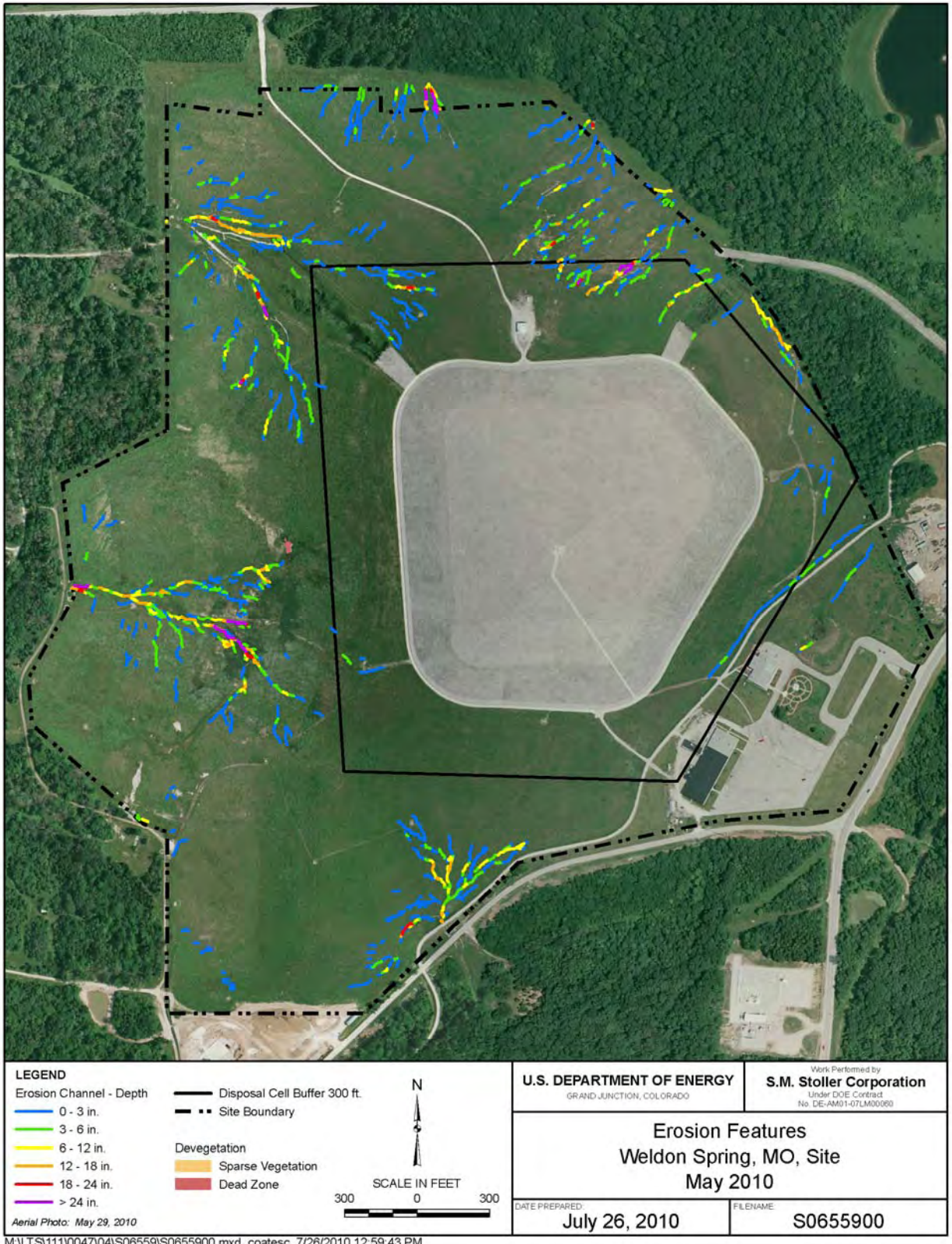


Figure 9. Erosion Channels within the Prairie

A field survey to evaluate erosion issues in the prairie was performed on August 2, 2007. The following individuals participated in the survey: Yvonne Deyo (Stoller, Weldon Spring Project Manager), Marilyn Kastens (Stoller soil reclamation specialist), Ben Moore (MDNR), Raymond Franson (MDNR), Frank Oberle (Pure Air Native Seed), and Jon Wingo (DJM Ecological Services). It was determined that existing erosion was temporary, typical of a newly reclaimed site in the process of stabilizing. It was recommended to monitor erosion channels and evaluate the other possible soil amendment and/or vegetation management strategies. Soil disturbance of any kind was not recommended at this time. The report that was prepared to document this trip was reviewed by the inspection participants during the 2007 inspection and included in the 2007 report.

In September 2009, a group of Legacy Management Support subject matter expert personnel met to discuss the current status of site erosion. It was determined that existing erosion continued to be fairly typical for a reclaimed site and no channels were currently a threat to the integrity of the disposal cell. The group agreed that continued monitoring of erosion would be prudent. The erosion will continue to be monitored and another mapping and evaluation is scheduled for the spring/early summer 2011.

It was noted during the 2010 inspection that vegetation had taken over some of the worse erosion areas located on the north side of the disposal cell considerably (Photo 24).

2.4.2 Quarry Area

No erosion areas were noted during the inspection of the Quarry area.

2.5 General Site Conditions

General site conditions as listed in the checklist were inspected and are discussed below.

2.5.1 Roads

The roads consist of asphalt roads leading into the property and a gravel road that extends around the disposal cell and to Gate D. The roads were in good condition.

2.5.2 Vandalism

Although the site is publicly accessible, signs are clearly posted at the disposal cell that the viewing platform is open during daylight hours only. Increasing evidence of nighttime access of the viewing platform has been noted. Public use of the site continues to rise. Because of on-going issues associated with this use (e.g., littering at various locations throughout the site including at the top of the disposal cell, occasional discovery of illegal drug paraphernalia, etc.), a private security firm has been hired to provide seasonal patrol coverage of the site during the evening hours. These patrols, along with the upgraded safety-oriented security system have dramatically curtailed the degree of undesirable activities at the site.

The disposal cell monument plaques were observed to have been vandalized during 2010. The corners of the plaques have been bent down by the use of excessive force. The plaques are still functional and nothing further will be done at this time.

2.5.3 Personal Injury Risks

No personal injury risks were observed.

2.5.4 Site Markers (Four Information Plaques on Top of Cell, Historical Markers, and Other Information Markers)

The four information plaques on top of the cell were generally in good condition (See Section 2.5.2.). There was vandalism noted to the plaques in that the corners had been bent down from the use of excessive force as noted above. The historical markers were inspected and were in good condition.

The plan also states that signs are posted on the LCRS fence to inform the public that trespassing is forbidden and that persons may call the DOE 24-hour security telephone number (970-248-6070 or 877-695-5322) for information. During the 2010 inspection, it was noted that these signs were posted on the LCRS fence.

2.6 Monitoring Wells

Monitoring wells in the Disposal Cell Monitoring Well Network, Chemical Plant Monitoring Well Network, and Quarry Monitoring Well Network were inspected. The inspection checklist required all the disposal cell wells to be inspected, and greater than 10 percent of the Chemical Plant and Quarry wells to be inspected. The checklist required the wells to be inspected to ensure they are properly secured and locked, in good condition, and to check if they need maintenance and have the proper ID number on the well. All of the wells that were inspected met the majority of these requirements. There were some wells that required some type of maintenance.

- Need new contact label: MW-4020, 4031, 4006, 4007, 4002, 2014, 2017, 2034, 4041, 2055, 3003.
- Need new well numbers: MW-2055, 3024, 3025, 3037
- Need painted: MW-1052, 2017, 2034, 4041
- Loose bollards: MW-1049, 2023, 4029

It should be noted that each well is inspected at least quarterly during the year when static water levels are recorded and that well maintenance and painting is ongoing.

At the time of the inspection it was discussed that abandonment of 16 wells was to begin during the week of November 1, 2010. These wells are listed below:

MW-2034, 2045, 3032, 3035, 3036, 4002, 4024, 4034, HIW1, LIW1, ICO1, ICO2, ICO3, ICO4, ICO5, ICO6.

It was determined that MW-4035 would be transferred to the Army.

2.6.1 Disposal Cell Monitoring Well Network

Each well in the disposal cell network was inspected and is listed below:

MW-2032, 2046, 2047, 2051, 2055.

2.6.2 Chemical Plant Area Monitoring Well Network

The inspection checklist requires at least 10 percent of the wells be inspected from the Chemical Plant monitoring well network. The monitoring well network consists of 85 wells owned by DOE and 4 wells owned by the Army. This number does not include the 5 disposal cell wells, although some of those wells are monitored for the groundwater remedy. Forty-nine wells were inspected (58%). Only fifty wells are monitored for the groundwater remedy of monitored natural attenuation. The remaining wells are monitored quarterly for static water levels only. The wells that were inspected are listed below:

MW-2006, 2012, 2013, 2104, 2017, 2023, 2024, 2033, 2034, 2045, 2046, 2049, 2050, 2053, 3003, 3006, 3023, 3024, 3025, 3026, 3027, 3028, 3029, 3031, 3037, 3040, 4001, 4002, 4006, 4007, 4020, 4027, 4028, 4029, 4030, 4031, 4034, 4035, 4035, 4036, 4039, 4040, 4041, 4042, 4043, ICO4, ICO5, ICO6, LIWI .

2.6.3 Quarry Monitoring Well Network

The inspection checklist requires greater than 10 percent of the wells in the Quarry monitoring well network be inspected. The monitoring well network consists of 34 wells. Fifteen wells were inspected (44%). The wells that were inspected are listed below:

MW-1002, 1004, 1005, 1006, 1007, 1008, 1009, 1013, 1014, 1027, 1030, 1031, 1032, 1049, 1052.

2.7 On-site Document and Record Verification

The following on-site documents and records were verified:

- Surveillance and Maintenance Plan: (*Long-Term Surveillance and Maintenance Plan for the Weldon Spring, Missouri, Site*, December 2008)
- Maintenance log (Plan of the Day/Week forms)
- NPDES permit(s): #MO-0107701, revised
- Metropolitan St. Louis Sewer District (MSD) agreement and records
- Groundwater monitoring records
- Leachate records
- Interpretive Center sign-in logs
- Telecons and interview records

2.8 Contacts

Several stakeholders were notified prior to the inspection in accordance with the checklist. These included:

- St. Charles County Sheriff
- Cottleville Fire District
- Francis Howell High School
- Simplex-Grinnel Alarm System
- St. Charles County

The institutional control contacts also were notified in regard to the inspection and to maintain annual contact with the representatives relevant to institutional controls. In the future, when institutional controls are established, this annual contact will be used to verify cognizance of the institutional controls and the requirements and/or restrictions with each representative. The representatives contacted are listed below.

- John Vogel – Missouri Department of Conservation
- Joel Porath – Missouri Department of Conservation
- Doyle Brown – Missouri Department of Conservation
- Mary Bryan – Missouri Department of Natural Resources – Parks
- Quinn Kellner – Missouri Department of Natural Resources – Parks
- Marsha Miller – Army
- Tom Blair – Missouri Department of Transportation
- Jim Gremaud - Missouri Department of Transportation
- Kevin Wideman - Missouri Department of Transportation

The St. Charles Planning and Zoning Department also was contacted and they verified that no planning and zoning activities were currently taking place within one-quarter mile of the Chemical Plant and Quarry Property. The Notation of Land Ownership was verified to be filed and present at the St. Charles Recorder of Deeds office by checking the county website at www.sccmo.org. It was noted that the county website had changed and this will be corrected in the next annual inspection checklist.

The Stoller Project Manager, Yvonne Deyo, and Environmental Data Manager, Randy Thompson, were interviewed as required by the inspection checklist.

All conversations and interviews were recorded on an Interview Record form from the EPA *Comprehensive Five-Year Review Guidance*. The forms for each of these contacts and interviews are attached as Appendix E.

2.9 Operation and Maintenance (O&M) Costs

The fiscal year (FY) 2010 long-term surveillance and maintenance costs for the Weldon Spring Site from October 1, 2009 to September 30, 2010 were budgeted at \$1,667,325.96. The actual costs were \$1,592,066.67.

2.10 Environmental Monitoring Data

The environmental data from the Weldon Spring Site are available on the following DOE website: www.lm.doe.gov/land/sites/mo/weldon/weldon.htm under the Geospatial Environmental Mapping System (GEMS) link. A quarterly internal report is issued which includes validated environmental data results for each quarter. The report includes site summary,

data trending, chain-of-custody information, adequacy of quality control sample results, data assessment summaries, information on data that are outside the range of historical concentrations, and data that merit explanation or follow-up action, sampling and analytical schedules, trip reports, and sampling location maps.

Results of all environmental monitoring data are summarized and included in the Annual Site Environmental Report. The report includes data trending information and also reports on other aspects of the project including status and regulatory information. The Annual Site Environmental Report for 2010 will be available in August 2011. The 2009 Annual Site Environmental Report is available on the Weldon Spring Website at www.lm.doe.gov/land/sites/mo/weldon/weldon.htm.

2.11 Prairie Maintenance

Section 2.6 of the Final LTS&M Plan states that routine maintenance of the prairie completed during the previous 12 months will be summarized in the annual inspection report. This summary is as follows:

Numerous prairie maintenance activities were performed throughout the previous 12 months.

In March 2010, wide burn breaks were mowed around the perimeters of prairie management units to support a possible controlled burn. Approximately 38 acres of prairie were burned on March 30.

In July, spot-spraying individual *Sericea lespedeza* and *Robinia pseudoacacia* plants with herbicide was performed as part of on-going efforts to reduce numbers and control encroachment of invasive weed species throughout the prairie area. A slight increase in the numbers of plants was observed during this season's eradication efforts. This is likely due to stimulation of the existing seed bank from controlled burning activities and is expected to be temporary. In September, follow-up control was performed on remaining plants by cutting the plant at the base of the stem, painting the cut base with herbicide, and then disposing of the plant top. This was not only effective at removing the few plants that remained after the July effort, but also ensured no mature seed from these plants would fall to the ground to germinate in the spring.

A garden of plants native to the state of Missouri was designed and constructed to surround the Interpretive Center and build awareness about the Weldon Spring Site. Garden maintenance consisting of manual weeding and occasional irrigation was performed throughout the growing season. Corn gluten, a cereal industry by-product with pre-emergent herbicide qualities was broadcast on garden beds throughout the spring season to assist in weed control efforts and act as an organic fertilizer. Dried seed heads from forbs were harvested and utilized for hand overseeding on the prairie area of the site in October and November 2010. Locations in the prairie with erosion and less plant establishment were targeted. Volunteers continued to perform garden maintenance activities throughout this period. Volunteers who are responsible for their maintenance have adopted a total of six large garden beds

3.0 Findings and Recommendations

1. Recommendation: Wells that required some type of maintenance.

- Need new contact label: MW-4020, 4031, 4006, 4007, 4002, 2014, 2017, 2034, 4041, 2055, 3003.
- Need new well numbers: MW-2055, 3024, 3025, 3037
- Need painted: MW-1052, 2017, 2034, 4041
- Loose bollards: MW-1049, 2023, 4029

Action: Apply the required maintenance to these wells.

Target Date: June 2011

2. Recommendation: Restamp Survey Monument WQ12

Action: Restamp Survey Monument WQ12

Target Date: The survey monument was restamped on November 9, 2010.

3. Recommendation: Place a new rock degradation test plot on the south side of the disposal cell.

Action: Place a new rock degradation test plot on the south side of the disposal cell.

Target Date: July 2011

4. Recommendation: Place signs on the disposal cell stating that video surveillance is in use or similar type action. This is in response to vandalism on the disposal cell, including disturbance of Test Plot #5.

Action: Place signs on the disposal cell stating that video surveillance is in use or similar type action.

Target Date: July 2011

5. Recommendation: Repair Survey Monument WS90 which was broke.

Action: Repair Survey Monument WS90.

Target Date: September 2011

6. Recommendation: Continue to monitor and evaluate erosion on the Chemical Plant Site.

Action: Continue to monitor and evaluate erosion on the Chemical Plant Site.

Target Date: Ongoing.

4.0 Photographs



Photo 1. Burgermeister Spring.



Photo 2. Inside Quarry Proper.



Photo 3. Southeast drainage.



Photo 4. Highway D culverts outlet.



Photo 5. Culvert under Highway 94.



Photo 6. Disposal cell inspection looking south.



Photo 1. Cell cover rock test plot TP1; north edge north facet (2003 Inspection).



Photo 2. Cell cover rock test plot TP1; north edge of north facet (2009 Inspection).



Photo 9. Cell cover test plot TP1; north edge of north facet.



Photo 3. Cell cover rock test plot TP2; north edge north facet (2003 Inspection).



Photo 4. Cell cover rock test plot TP2; north edge north facet (2009 Inspection).



Photo 12. Cell cover test plot TP2; bottom of north side slope.



Photo 5. Cell cover rock test plot TP3; northeast ridgeline (2003 Inspection).



Photo 6. Cell cover rock test plot TP3; northeast ridgeline (2009 Inspection).



Photo 15. Cell cover test plot TP3; northeast ridgeline.



Photo 7. Cell cover rock test plot TP4; located on upper west side (2003 Inspection).



Photo 8. Cell cover rock test plot TP4; located on upper west side (2009 Inspection).



Photo 18. Cell cover test plot TP4; located on upper west side.



Photo 9. Cell cover rock test plot TP5; located on lower west side (2003 Inspection).



Photo 10. Cell cover rock test plot TP5; located on lower west side (2009 Inspection).



Photo 21. Cell cover test plot TP5; located on lower west side.



Photo 22. Disposal cell, small hole dug into rock.



Photo 23. LCRS Sump.



Photo 24. Erosion areas north of the disposal cell, showing vegetative growth.

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Appendix A
Inspection Agenda

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WELDON SPRING SITE ANNUAL INSPECTION
AGENDA

Tuesday, October 26, 2010

8:30 – 9:00 am

Inspectors/observers will divide into 2 separate groups. Review agenda, inspection teams, and safe work issues. Review inspection report and findings/corrective actions on last year's inspection. Team 1 (Team Leader - Terri Uhlmeyer) will cover the Chemical Plant Area. Team 2 (Team Leader – Randy Thompson) will cover the Southeast Drainage and the Quarry Area.

9:00 – 11:30 am

Team 1: Inspect land & shallow groundwater use on Army property and DOE property:

- Monitoring wells along Army property roads
- Drive all Army roads in proposed IC area and note any land disturbance
- Disposal Cell buffer zone
- Monitoring wells on DOE Chemical Plant property

Team 2: Inspect land & shallow groundwater use on Missouri Department of Conservation property, Weldon Spring Conservation Area:

- Southeast Drainage from Army Road to Hwy 94
- Hwy 94 culvert
- Southeast Drainage from Hwy 94 to Missouri River, incl Springs 5303 & 5304

11:30 am – 12:30 pm

Lunch

12:30 – 4:00 pm

Team 1: Inspect land & shallow groundwater use on Missouri Department of Conservation property, August A. Busch Conservation Area:

- Burgermeister Spring
- Spring 6303
- Monitoring wells along MDC roads
- Hwy D Culvert

Team 2: Inspect land & shallow groundwater use on Missouri Department of Conservation property, Weldon Spring Conservation Area and DOE property:

- DOE Quarry Property (Quarry rim wells)
- DOE Quarry Property (Quarry proper)
- Reduction zone area
- Public Water District #2 well field area

4:00 – 4:30 pm

Meeting in Room 3A: discuss day-1 inspection results

Wednesday, October 27, 2010

8:30 – 9:00 am

Meeting in Room 3A to review next inspection objectives. Inspectors/observers divide into 2 separate groups to cover 5 transects each on the disposal cell. The Team Leaders will be Terri Uhlmeier and Randy Thompson

9:00 – 11:30 am

Disposal Cell Inspection – Potential settlement, rock degradation, vegetation

Team 1: Walk 5 Transects

Team 2: Walk 5 Transects

11:30 am – 12:30 pm

Lunch

12:30 pm – 1:00 pm

Teams 1 & 2: reconvene in Room 3A for trip to LCRS.

1:00– 3:00 pm

Inspection of LCRS (No confined space entry planned).

Walk disposal cell buffer zone inspecting for erosion issues.

3:00 – 4:00 pm

Document and paperwork review

4:00 – 4:30 pm

Debriefing for DOE and Stoller management of preliminary inspection findings

Thursday, October 28, 2010

8:30-11:30

Review Aerial Survey Results

Discuss CERCLA Five-Year Review

12:30 – 4:00

This time period will be used to conduct any items that do not fit within the 2 previous days, such as additional paperwork review, erosion inspections, walk-down of the LCRS pipeline, and inspection of the historical markers.

Appendix B
Corrective Action Report

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Completed Findings, Recommendations and Corrective Actions from 2009 Weldon Spring LTSM Annual Inspection

- 1. Finding: During a review of the Metropolitan St. Louis Sewer District (MSD) and purge water information, it was determined that the wells need to be updated with MSD and that all of the approval letters from MSD are not in the LTS&M Plan.**

Corrective Action: Submit a new letter to MSD, including new wells to be added. Ensure that all of the letters are included in the LTS&M Plan during its next revision

Target Date: September 2009

Response: The letters were included in the minor revision to the LTS&M which was transmitted to the regulators on October 4, 2010. A letter detailing program updates was sent to EPA and MDNR on September 16, 2010. A letter will be sent to MSD after an appropriate review period by the regulators.

- 2. Recommendation: Continue to monitor and evaluate erosion on the Chemical Plant Site.**

Corrective Action: Continue to monitor and evaluate erosion on the Chemical Plant Site.

Target Date: Ongoing

Response: The erosion channels within the entire prairie were mapped in May 2010 for the fourth year in a row. The resulting map indicated that erosion channels were repairing naturally in some locations and becoming deeper in others. In September 2009, a group of Legacy Management Support subject matter expert personnel met to discuss the current status of site erosion. It was determined that existing erosion continued to be fairly typical for a reclaimed site and no channels were currently a threat to the integrity of the disposal cell. The group agreed that continued monitoring of erosion would be prudent.

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Appendix C
Inspection Checklist

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Annual Site Inspection Checklist

Purpose of the Checklist

This checklist has been developed from the EPA guidance document *Comprehensive Five Year Review Guidance* dated June 2001 (OSWER No. 9355.7-03B-P) and from Section 2.3 of the *Long-Term Surveillance and Maintenance Plan for the Weldon Spring, Missouri, Site*. The checklist was modified to site-specific conditions as recommended by the guidance document. The checklist will be completed annually during the Weldon Spring Site annual surveillance and maintenance inspection. The checklist will also be used to assist in compiling information for the five-year review.

I. SITE INFORMATION	
Site name: DOE Weldon Spring Site	Date(s) of inspection: Oct 26-28, 2010
Location: St. Charles, MO	EPA ID: MO6210022830
Agencies accompanying DOE for portions of the annual inspection: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> EPA, Region 7 <input type="checkbox"/> MDNR <input checked="" type="checkbox"/> Other (list): MoDOT, MDC, St. Charles County 	Weather: Mid 60's Windy
Remedy Includes: <ul style="list-style-type: none"> Disposal Cell Institutional controls Monitored Natural Attenuation Long Term Monitoring Other _____ 	
Inspectors <u>Terri Uhlmeier (Stoller), Randy Thompson (Stoller)</u>	
Participants <u>Patrick Anderson (MDNR)</u>	
<u>Vijendra Kathari (DOE)</u>	
<u>Jane Powell (DOE)</u>	
<u>Hoai Tran (EPA)</u>	
<u>Hannah Humphrey (MDNR)</u>	
<u>Kevin Wideman (MoDOT)</u>	
<u>John Vogel (MDC)</u>	
<u>Ryan Tilley (St. Charles County Health)</u>	
<u>Pieter Sheehan (St. Charles County Health)</u>	
<u>Tim Zirbes (Stoller)</u>	
<u>Tom Welton (Stoller)</u>	
<u>Becky Cato (Stoller)</u>	
<u>Vivonne Deyo (Stoller)</u>	

II. INTERVIEWS (Check all that apply)

1. **Local Site Manager** Yvonne Deyo Site Manager 10/25/10
 Name Title Date
 Interviewed at site at office by phone Phone no. 300-0012
 Problems, suggestions; Report attached _____

2. **Environmental Data Manager** Randy Thompson Data Manager 10/20/10
 Name Title Date
 Interviewed at site at office by phone Phone no. 636-926-7040
 Check to ensure that environmental data is reviewed and trended.
 Problems, suggestions; Report attached _____

3. **Other Staff (as applicable)** N/A
 Name Title Date
 Interviewed at site at office by phone Phone no. _____
 Problems, suggestions; Report attached _____

4. **Local response agencies:** Contact to notify of annual inspection and to determine if there are any concerns or issues.

Agency: St. Charles County Sheriff
 Contact Jim Hudson Captain 10/18/10 636-949-7325
 Name Title Date Phone no.
 Problems; suggestions; Report attached _____

Agency: Cottleville Fire Department
 Contact Mark Boente Asst. Fire Chief 10/13/10 636-447-6655
 Name Title Date Phone no.
 Problems; suggestions; Report attached _____

Agency: SimplexGrinnel (LCRS and Interpretive Center Alarm Company)
 Contact Cindy _____ 10/25 888-746-7539
 Name Title Date Phone no.
 Problems; suggestions; Report attached _____

Agency: N/A
 Contact _____ _____ _____ _____
 Name Title Date Phone no.
 Problems; suggestions; Report attached _____

5. **Stakeholders:** Contact to notify of annual inspection and to determine if there are any concerns or issues.

Agency: Francis Howell High School **Contact Name:** Mr. Chris Greiner, Principal

Contact Name Current yes no

Phone Number Current yes no _____ (new phone no. if applicable)

Contact Bandy Carter Asst. Principal 10/28/10 636-851-4700
 Name (if different than above) Title Date Phone no.

4080 x 4701

Problems; suggestions; Report attached _____

Agency: Missouri Department of Transportation (local office) **Contact Name:** Bill Wilcox

Contact Name Current yes no

Phone Number Current yes no Bill Wilcox (new phone no. if applicable)

Contact same _____ 10/25/10 636-441-8471
 Name (if different than above) Title Date Phone no.

Note: Set up date and time and provide annual training on the site institutional controls and culverts.

Problems; suggestions; Report attached _____

Agency: St. Charles County **Contact Name:** Pieter Sheehan, Environmental Public Health Manager

Contact Name Current yes no

Phone Number Current yes no N/A (new phone no. if applicable)

Contact same same 10/13/10 636-949-7406
 Name (if different than above) Title Date Phone no.

Problems; suggestions; Report attached _____

6. **Other interviews** . Report attached.

III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)

1. **Documents**
 Surveillance and Maintenance Plan Readily available Up to date N/A
 Maintenance logs Readily available Up to date N/A
 Remarks _____

2. **Health and Safety Procedures** Readily available Up to date N/A
 Remarks _____

3. **Permits and Service Agreements**
 NPDES Permits Readily available Up to date N/A
 MSD agreement and records Readily available Up to date N/A
 Other permits _____ Readily available Up to date N/A
 Remarks _____

4.	Groundwater Monitoring Records Remarks _____	<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A
5.	Leachate Records Remarks _____	<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A
6.	Interpretative Center Sign-In Logs Remarks _____	<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A

IV. O&M COSTS

1.	O&M Cost Records (This information may be reviewed and completed prior to the inspection) Original O&M cost estimate <u>1,667,325.96</u> Total annual cost for prior federal fiscal year: From <u>10/1/09</u> To <u>9/30/10</u> <u>4,592,066.67</u> Date Date Total cost
2.	Unanticipated or Unusually High O&M Costs During Review Period Describe costs and reasons: <u>The upgrade to the Interpretive Center is included in this cost.</u>

V. INSTITUTIONAL CONTROLS

Institutional Control (IC) Inspections	
1.	Land and Shallow Groundwater Use within the Chemical Plant Site and Quarry Property Inspect for indications of excavations into soil or bedrock and groundwater withdrawal or use in restricted areas. If any party has been granted use of portions of the Chemical Plant or Quarry area, inspect to ensure that land use is in compliance with the terms of the restrictions within the notation. Note any observations: <u>No indications of excavations or groundwater withdrawal or use.</u>
2.	Groundwater Use in Areas Surrounding the Chemical Plant Groundwater use is restricted in areas. Inspect affected areas for evidence of groundwater or spring water use (Burgermeister Spring and Spring 6303). Inspect to ensure that land use continues to be in compliance with the terms of the license, easement, or permit and the restrictions contained therein. Note any observations: <u>Inspected monitoring wells on Army property and GW restriction area. Found monument WS46. The Army is building a large reserve building. Found WS46 and WS90. WS90 was damaged (boundary markers)</u>

3.	<p>Groundwater (Quarry)</p> <p>Groundwater use is restricted in areas. Inspect affected areas for evidence of groundwater withdrawal or use in the area of impact. Inspect to ensure that land use continues to be in compliance with the terms of the license and the restrictions contained therein.</p> <p>Note any observations: <u>No evidence of groundwater withdrawal or use. No land use changes. Following monuments were located: WQ 7, 8, 10, 11, 12. WQ 12 needs to be restamped.</u></p>
4.	<p>Land Use in Quarry Area Reduction Zone</p> <p>A naturally occurring reduction zone exists in soil south of the Katy Trail and north of the Femme Osage Slough. Inspect for indications of excavations into soils and bedrock in the uranium reduction zone. Inspect to ensure that land use continues to be in compliance with the terms of the easement and the restrictions contained therein.</p> <p>Note any observations: <u>No indications of excavations into soils or bedrock. No land use changes. No Dig signs were posted on bollards</u></p>
5.	<p>Southeast Drainage</p> <p>Check for indications of residential use or construction in the Southeast Drainage (200-foot-wide corridor), or other activity that would indicate nonrecreational use of the area. Check Springs 5303 and 5304 for residential, commercial, or agricultural use of spring water.</p> <p>Note any observations: <u>No indications of residential use or construction in the SE Drainage or corridor. No use of springs was noted. The springs were flowing</u></p>
6.	<p>Highway D Culvert</p> <p>Check for signs of disturbance of the affected region where the Frog Pong outlet culverts pass beneath Highway D and in the utility rights-of-way in the affected area.</p> <p>Note any observations: <u>No changes or disturbance to Culverts.</u></p>
7.	<p>State Route 94 Culvert</p> <p>Check for signs of disturbance of the affected region where the culvert passes beneath State Route 94 and in the utility rights-of-way in the affected area.</p> <p>Note any observations: <u>A portion of the culvert had been cut by stoller in Aug 2010 at the request of MoDOT. The culvert is now open.</u></p>

8. **Pipeline from LCRS to Missouri River**
 Inspect the entire length of the pipeline and outfall for any disturbances or maintenance needs.
 Note any observations: No disturbances in areas of pipeline or manhole. Portion of pipeline was replaced by the Army during the construction of their new Reserve Center.

Institutional Control Annual Contact Log

In accordance with the LTS&M Plan, the following will be contacted to verify cognizance of institutional controls and real estate agreements. Fill in all that apply.

1. **Agency:** Missouri Department of Conservation **Contact Name:** Joel Porath, Wildlife Regional Supv.
Address: August A. Busch Memorial Conservation Area, 2360 Highway D, St. Charles, MO 63304
Institutional Control and Real Estate Licenses to Verify: Chemical Plant Groundwater Use Restriction, Quarry Area Groundwater Use Restriction, Quarry Reduction Zone Land Use Restriction, Southeast Drainage Residential Use Restriction, North Gate Access, Well Sampling Access Agreement, Effluent Discharge Pipeline, Hamburg Trail Use Agreement.
 Contact Name Current yes no
 Phone Number Current yes no 636-300-1953 X 226 (new phone no. if applicable)
 Contact same same 10/12/10 636-441-4554
 Name (if different than above) Title Date Phone no.
 Problems; suggestions; Report attached

2. **Agency:** Missouri Department of Conservation **Contact Name:** John Vogel, Area Manager
Address: August A. Busch Memorial Conservation Area, 2360 Highway D, St. Charles, MO 63304
Institutional Control and Real Estate Licenses to Verify: See No. 1
 Contact Name Current yes no
 Phone Number Current yes no same (new phone no. if applicable)
 Contact same same 10/11/10 636-300-1953 X 318
 Name (if different than above) Title Date Phone no.
 Problems; suggestions; Report attached

3. **Agency:** Missouri Department of Conservation **Contact Name:** Doyle Brown, Policy Coordinator
Address: P.O. Box 180, Jefferson City, MO 65102
Institutional Control and Real Estate Licenses to Verify: See No. 1
 Contact Name Current yes no
 Phone Number Current yes no same (new phone no. if applicable)
 Contact same same 10/22/10 573-522-4115 x3355
 Name (if different than above) Title Date Phone no.
 Problems; suggestions; Report attached

4. **Agency:** Missouri Department of Natural Resources **Contact Name:** Mary Bryan, Real Estate Manager
Address: P.O. Box 176, Jefferson City, MO 65102
Institutional Controls and Real Estate Licenses to Verify: Quarry Area Groundwater Use Restriction, Southeast Drainage Residential Use Restriction, Well Sampling Access Agreement, Effluent Discharge Pipeline

Contact Name Current yes no
 Phone Number Current yes no N/A (new phone no. if applicable)

Contact SAME SAME 10/13/10 573-751-7987
 Name (if different than above) Title Date Phone no.
 Problems; suggestions; Report attached

5. **Agency:** Missouri Department of Natural Resources **Contact Name:** Quinn Kellner, Natural Resource Manager, Jones-Confluence Point State Park
Address: P.O. Box 67, West Alton, MO 63386
Institutional Controls and Real Estate Licenses to Verify: Quarry Area Groundwater Use Restriction, Southeast Drainage Residential Use Restriction, Well Sampling Access Agreement, Effluent Discharge Pipeline

Contact Name Current yes no
 Phone Number Current yes no N/A (new phone no. if applicable)

Contact SAME SAME 10/19/10 636-899-1135
 Name (if different than above) Title Date Phone no.
 Problems; suggestions; Report attached

6. **Agency:** Missouri Department of Transportation **Contact Name:** Tom Blair, Asst. District Engineer
Address: 1590 Woodlake Dr., Chesterfield, MO 63017
Institutional Controls to and Real Estate Licenses to Verify: Chemical Plant Groundwater Use Restriction, and question MoDOT regarding Missouri State Highway 94 Culvert and Highway D culverts about plans for repairs/replacements.

Contact Name Current yes no 314-453-1803
 Phone Number Current yes no N/A (new phone no. if applicable)

Contact SAME SAME 10/18/10 314-340-4203
 Name (if different than above) Title Date Phone no.
 Problems; suggestions; Report attached

7. **Agency:** Missouri Department of Transportation **Contact Name:** Kevin Wideman, Sr. Environmental Specialist
Address: P.O. Box 270, Jefferson City, MO 65102
Institutional Controls to and Real Estate Licenses to Verify: Chemical Plant Groundwater Use Restriction, and question MoDOT regarding Missouri State Highway 94 Culvert and Highway D culverts about plans for repairs/replacements.

Contact Name Current yes no
 Phone Number Current yes no N/A (new phone no. if applicable)

Contact SAME SAME 10/14/10 573-526-4171
 Name (if different than above) Title Date Phone no.
 Problems; suggestions; Report attached

8. **Agency:** Missouri Department of Transportation **Contact Name:** Jim Gremaud, St. Charles County Area Engineer
Address: 6780 Old Hwy. N. St. Charles, MO 63304
Institutional Controls to and Real Estate Licenses to Verify: Chemical Plant Groundwater Use Restriction, and question MoDOT regarding Missouri State Highway 94 Culvert and Highway D culverts about plans for repairs/replacements.
Contact Name Current yes no
Phone Number Current yes no N/A (new phone no. if applicable)

Contact same same 10/18/10 636-240-5277
Name (if different than above) Title Date Phone no.
Problems; suggestions; Report attached _____

9. **Agency:** U.S. Dept. of Army **Contact Name:** Marsha Miller, Facility Manager
Address: Weldon Spring Training Area, 7301 Hwy 94 S. St. Charles, MO 63304
Institutional Controls to and Real Estate Licenses to Verify: Chemical Plant Groundwater Use Restriction, Effluent Discharge Pipeline, Well Sampling Access Agreement
Contact Name Current yes no
Phone Number Current yes no N/A (new phone no. if applicable)

Contact same same 10/11/10 636-329-1200
Name (if different than above) Title Date Phone no.
Problems; suggestions; Report attached _____

10. **Agency:** St. Charles County Recorder of Deeds
Address: 201 N 2nd, St. Charles, MO 63301
Institutional Controls to and Real Estate Licenses to Verify: Recorded real estate restrictions at the Recorder of Deeds Office or on the Internet at www.saintcharlescounty.org

Contact N/A website changed: ~~www~~ http://recorder.sccmo.org/recorder/
Name Title Date Phone no.
Problems; suggestions; Report attached Verified on the above requisid websik that the Notation of Land Ownership was filed in Book 3754, Page 419
St. Charles County website is now www.sccmo.org/Home/

11. **Agency:** St. Charles County Planning and Zoning Department **Contact Name:** Wayne Anthony
Address: 201 N 2nd, St. Charles, MO 63301 Request info regarding if any Planning + zoning activities
Institutional Controls to and Real Estate Licenses to Verify: Awareness of Restrictions with 1/4 mile of the chemical plant + quarry properties
Contact Name Current yes no
Phone Number Current yes no N/A (new phone no. if applicable)

Contact same same 10/18/10 636-949-7900x7221
Name Title Date Phone no.
Problems; Report attached suggestions; _____

General

1. **Land Use Changes On Site** Yes No
Remarks _____

2. **Land Use Changes Off Site that could affect site** Yes No
Remarks _____

VI. GENERAL SITE CONDITIONS

1. **Roads** Location shown on site map Roads adequate Yes No
Remarks _____

2. **Vandalism** Location shown on site map Vandalism noted Yes No
Remarks Rocks were moved to form a small hole on the disposal cell along Transect #5
Rocks were removed from Test Plot #5
The Plaques on top of the cell have been vandalized

3. **Personal Injury Risks** Housekeeping maintained Yes No
 Yes No
Remarks _____

4. **Site Markers (Four Information Plaques on Top of Cell, Historical Markers, and Other Information Markers)**
 Location shown on site map Legible and Secure Yes No
In Good Condition Yes No
Remarks The information plaques on top of the cell have been vandalized. The corners have been beat on and beat down.

5.	Guard Rail Around Cell <input checked="" type="checkbox"/> Location shown on site map Secure <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks _____ _____ _____	
6.	Stairs to Top of Cell <input checked="" type="checkbox"/> Location shown on site map Stairs in good condition <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Handrail stable and in good condition <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks _____ _____ _____	
7.	Other Site Conditions: Remarks _____ _____ _____ _____
VII. EROSION	
1.	Chemical Plant Areas <input checked="" type="checkbox"/> Location shown on site map Erosion evident <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Depth _____ Remarks <i>The erosion has been mapped in 2007, 2008, 2009, and 2010. The erosion figure is included in the inspection report. It shows location and estimated depth. The erosion will continue to be monitored. It was noted that some of the worst erosion channels on the north side of the cell have good vegetation growing in them.</i>
2.	Quarry Area <input type="checkbox"/> Location shown on site map Erosion evident <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth _____ Remarks _____ _____ _____

VIII. CHEMICAL PLANT DISPOSAL CELL

1. **Settlement /Bulges** Location shown on site map New settlement noted Yes No

A. Annually: Walk along the grade break at the top of the side slopes, around the cell perimeter, and along 10 transects across the cell surface. Inspect for local depressions, regional departures from planar surfaces, and shifts in intersections (vertices) of cell surface planes. Inspect for vertical shear of the cover layers indicated by sudden, abrupt steps that exceed an approximately 6-inch change of surface level over no more than 10 feet distance.

B. During 5-Year Review Inspections (Beginning 2005 and at 5-year Intervals): Conduct an aerial mapping survey with a vertical resolution not less precise than 0.5 feet. Produce and record maps and survey data for the cell surface represented by 1.0 foot contour intervals. Evaluate the data for indications of settlement. Consider the position and spacing of contour lines as indications of elevation change and possible settlement.

Remarks *The inspectors walked the 10 transects. Noted 2 additional minor depressions which will be put on map. Hole dug near transect 5. Aerial survey was performed in May 2010. Was discussed during inspection. Aerial survey indicated general settlement. No major changes*

2. **Rock Cover** Signs of degradation Yes No Signs of intrusion Yes No

A. Annually: During settlement monitoring inspection also visually inspect for departures from original rock conditions or from the previous inspection. Note observable discoloration on areas larger than 2,500 square feet, presence of finer materials at surface and apparent rock gradation changes. Document rock conditions annually with photographs.

B. During 5-Year Review Inspections (Beginning 2005 and at 5-year Intervals): Inspect cell cover for gradation changes by walking 10 transects across the cell. Concentrations of degraded, split, or weathered pieces of limestone will be mapped, photodocumented and visually assessed as a percentage of rock exposed within each mapped area. If degraded rock is evenly distributed, inspectors will estimate the overall percentage of degraded rock. If the amount of degraded rock appears to be increasing, based on a review of previous annual rock quality assessments, additional monitoring or gradation testing will be performed. If rock does not appear degraded, photodocumentation of several GPS located areas will establish rock conditions for future reference.

Remarks *The 5 rock degradation test plots were compared to previous years photos. The rocks had not changed or degraded. ~~So~~ The rocks in Test Plot #5 had been disturbed with 3 rocks being removed.*

3. **Vegetative Growth** Weeds or Plants on Cell Yes No

Remarks _____

4.	Wet Areas/ Water Damage		
	Wet areas <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Location shown on site map	Areal extent _____
	Ponding <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Location shown on site map	Areal extent _____
	Seeps <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Location shown on site map	Areal extent _____
	Remarks _____		

5.	Toe/Apron Drains	Proper drainage <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Silting <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	Erosion <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Remarks _____	

6.	Slope Instability	<input type="checkbox"/> Location shown on site map	Evidence of slope instability <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	Remarks _____		

7.	Leachate Collection and Removal System	<input checked="" type="checkbox"/> Fence/Gates/Locks in good condition	
	<input checked="" type="checkbox"/> Properly secured/locked	<input checked="" type="checkbox"/> Functioning	<input checked="" type="checkbox"/> Routinely sampled <input checked="" type="checkbox"/> Good condition
	<input checked="" type="checkbox"/> LCRS flow rates	<input checked="" type="checkbox"/> Review data trending and Action Leakage Rate	
	<input type="checkbox"/> Sump Containment System (Burrito) flow rates	<input type="checkbox"/> Burrito flow rate issues	
	<input checked="" type="checkbox"/> Compliance with MSD Agreement	<input type="checkbox"/> Review shipping records	
	Data Issues <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Flow Rate Issues <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
	Remarks _____		

8.	Condition of 300 Ft. Buffer Zone	Erosion <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	Remarks _____		

9.	Condition of Prairie	Erosion <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	Remarks _____		

IX. GROUNDWATER MONITORING			
1.	Disposal Cell Monitoring Well Network	<input checked="" type="checkbox"/> Properly secured/locked	<input checked="" type="checkbox"/> Functioning <input checked="" type="checkbox"/> Sampled in accordance with LTS&M Plan
	<input checked="" type="checkbox"/> Good condition	<input type="checkbox"/> Evidence of surface water infiltration at casing	<input type="checkbox"/> Needs maintenance
	<input checked="" type="checkbox"/> Proper ID on each well	<input type="checkbox"/> Acceptable quality of data	
	Data Issues <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Remarks <u>Inspected all 5 Disposal cell wells MW-2032, 2046, 2047, 2051, 2055. The ID no. for 2055 had been scraped off for repainting, but was still visible.</u>	

2. **Chemical Plant Groundwater Monitoring Well Network**
 Properly secured/locked Functioning Sampled in accordance with LTS&M Plan
 Good condition Evidence of surface water infiltration at casing Needs maintenance
 Acceptable quality of data *Some wells reg. maintenance are detailed in the inspection report -*
 Data Issues Yes No
 List wells checked by number (> 10% of wells) MW-2006, 2012, 2013, 2014, 2017, 2023, 2024, 2033, 2034, 2045, 2046, 2049, 2050, 2053, 3003, 3006, 3023, 3024, 3025, 3026, 3027, 3028, 3029, 3031, 3037, 3040, 4001, 4002
 Remarks 4006, 4007, 4020, 4027, 4028, 4029, 4030, 4031, 4034, 4035, 4036, 4037, 4040, 4041, 4042, 4043, 1C04, 1C05, 1C06, 11W1.

3. **Quarry Monitoring Well Network**
 Properly secured/locked Functioning Sampled in accordance with LTS&M Plan
 Good condition Evidence of surface water infiltration at casing Needs maintenance
 Acceptable quality of data *MW-1052 needed repainting*
 Data Issues Yes No
 List wells checked by number (> 10% of wells) MW-1002, 1004, 1005, 1006, 1007, 1008, 1009, 1013, 1027, 1030, 1031, 1032, 1049, 1052
 Remarks MW-1052 needed repainting.

X. OVERALL OBSERVATIONS

Implementation of the Remedies
 Describe issues and observations relating to whether the remedies are effective and functioning as designed.
This is in the inspection for the 4th Five year Review.
The remedy is in place and implemented in acc. with the applicable Record of Decisions.
The actual remedies will be evaluated in the CERCLA Five-year Review Report, which will be final in September 2011

Adequacy of O&M
 Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedies.
The groundwater monitoring wells are in good condition and maintained by a full-time staff.

Early Indicators of Potential Remedy Problems

Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs that suggest that the protectiveness of one or more of the remedies may be compromised in the future.

No issues

Opportunities for Optimization

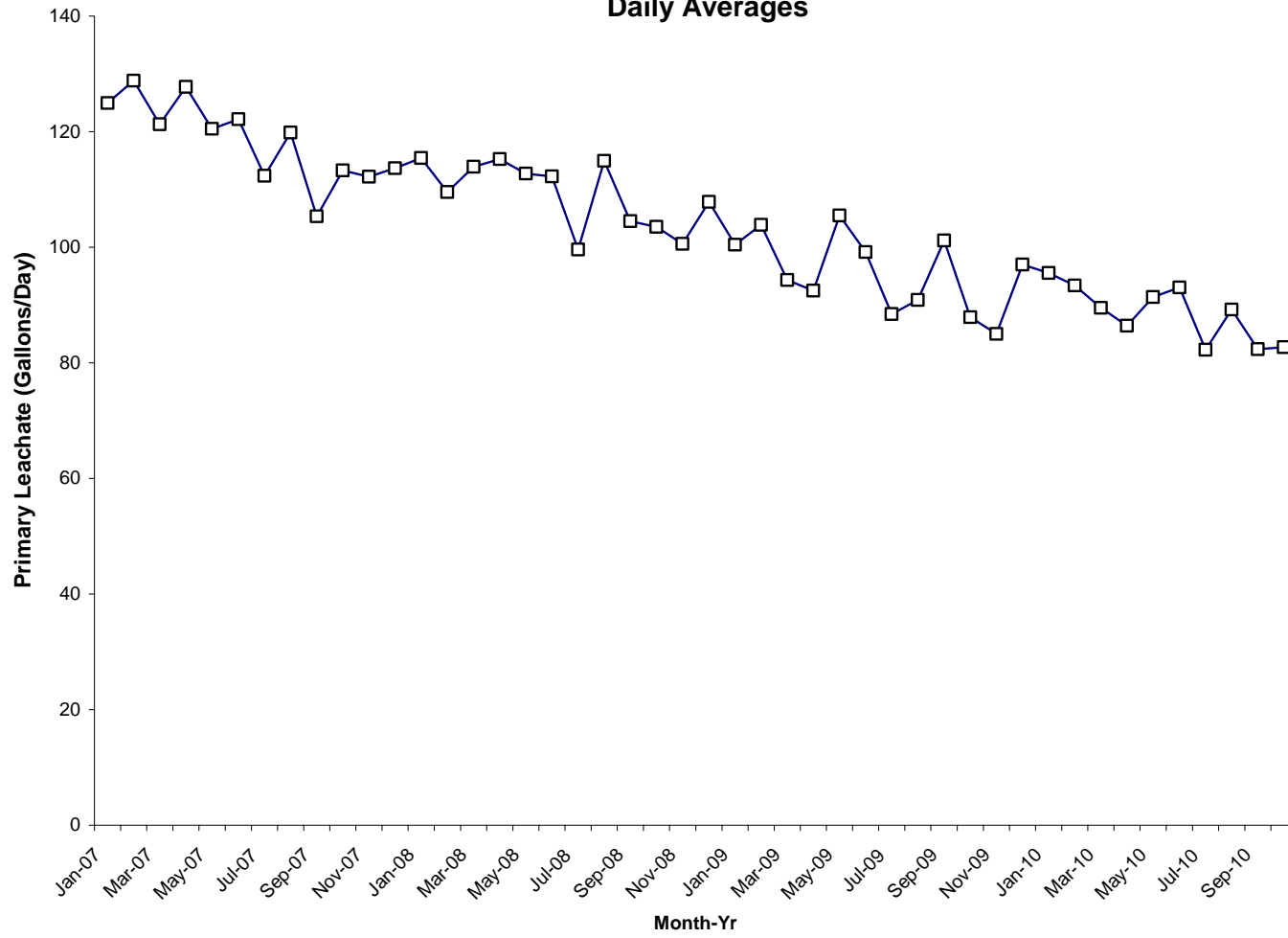
Describe possible opportunities for optimization in monitoring tasks or the operation of the remedies.

The LCRS has a real time monitoring system with the SOARS program.

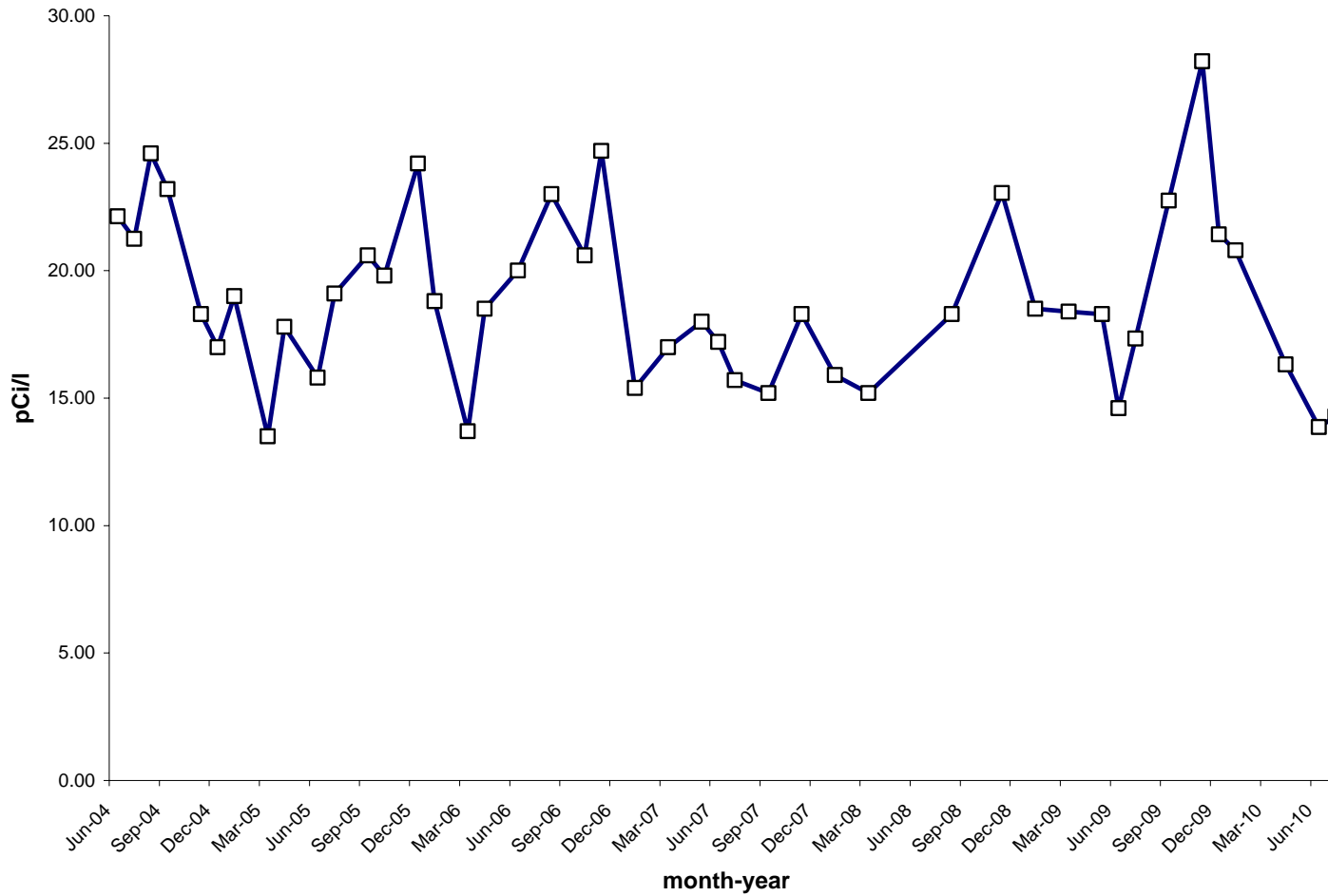
Appendix D
LCRS Data

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PRIMARY LEACHATE FLOW Daily Averages



Total Uranium Levels in the Primary Leachate



Month/ Year	Days	Sump Volume Start (gal)	Sump Volume End of Month (gal)	Transferred from sump (gal)	Transferred to Sump from the Burrito (gal)	Purge water transferred to Sump (gal)	East Secondary Total per Month (gal)	West Secondary Total per Month (gal)	Primary Leachate Total Volume per month (gal)	Primary Leachate (gal/day)	East Secondary (gal/day)	West Secondary (gal/day)	Burrito Flow (gal/day)	Leachate Flow Rate from Primary, Secondary and Burrito Water (gal/day)	Combined Secondary and Burrito Water Leak Rate (gal/acre/day)
Oct-08	31	5,317	8,836	0	203	0	87	19	3209	104	2.8	0.6	6.5	113	0.42
Nov-08	30	8,836	5,104	7,056	188	20	87	12	3018	101	2.9	0.4	6.3	110	0.40
Dec-08	31	5,104	8,755	0	198	0	92	18	3343	108	3.0	0.6	6.4	118	0.41
Jan-09	31	8,755	3,417	8,710	157	0	87	14	3114	100	2.8	0.5	5.1	109	0.35
Feb-09	28	3,417	6,542	0	125	0	78	14	2908	104	2.8	0.5	4.5	112	0.32
Mar-09	31	6,542	2,455	7,303	154	32.8	90	16	2923	94	2.9	0.5	5.0	103	0.35
Apr-09	30	2,445	5,493	0	176	0	83	14	2775	93	2.8	0.5	5.9	102	0.38
May-09	31	5,493	2,012	7,037	195	0	77	14	3270	105	2.5	0.5	6.3	115	0.38
Jun-09	30	2,012	5,338	0	220	28	86	17	2975	99	2.9	0.6	7.3	110	0.45
Jul-09	31	5,338	1,275	7,222	268	0	86	14	2741	88	2.8	0.5	8.8	100	0.49
Aug-09	31	1,275	4445	0	250	0	87	15	2818	91	2.8	0.5	8.1	102	0.47
Sep-09	30	4,445	3398	4,486	253	55.7	82	13	3035	101	2.7	0.4	8.4	113	0.48
Oct-09	31	3,398	6,509	0	292	0	83	12	2724	88	2.7	0.4	9.4	100	0.52
Nov-09	30	6,509	1815	7,578	244	0	78	12	2550	85	2.6	0.4	8.1	96	0.46
Dec-09	31	1,815	5,138	0	228	0	74	13	3008	97	2.4	0.4	7.4	107	0.42
Jan-10	31	5,138	2,149	6,260	201	0	81	18	2961	96	2.6	0.6	6.5	105	0.40
Feb-10	28	2,149	5,038	0	155	35.9	72	11	2615	93	2.6	0.4	5.5	102	0.35
Mar-10	31	5,038	8,077	0	169	0	82	13	2775	90	2.6	0.4	5.5	98	0.35
Apr-10	30	8,077	3347	7,587	177	0	77	11	2592	86	2.6	0.4	5.9	95	0.37
May-10	31	3,347	6509	0	236	0	81	13	2832	91	2.6	0.4	7.6	102	0.44
Jun-10	30	6,509	9,651	0	265	0	75	11	2791	93	2.5	0.4	8.8	105	0.49
Jul-10	31	9,651	2755	9,826	294	0	76	10	2550	82	2.5	0.3	9.5	95	0.51
Aug-10	31	2755	5906	0	301	0	73	11	2766	89	2.4	0.4	9.7	102	0.52
Sep-10	30	5906	8740	0	285	0	69	10	2470	82	2.3	0.3	9.5	94	0.51
Oct-10	31	8740	3955	7,685	255	0	69	12	2564	83	2.2	0.4	8.2	94	0.45

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Appendix E
Interviews and Contacts

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INTERVIEW RECORD		
Site Name: Weldon Spring Site		EPA ID No.: MO6210022830
Subject: Annual Inspection		Time: 9:30 am Date: 10/12/10
Type: <input checked="" type="checkbox"/> Telephone <input type="checkbox"/> Visit <input type="checkbox"/> Other Location of Visit:		Incoming <input checked="" type="checkbox"/> Outgoing
Contact Made By:		
Name: Terri Uhlmeyer	Title: Compliance Manager	Organization: SM Stoller, Corp.
Individual Contacted:		
Name: Joel Porath	Title: Wildlife Regional Supv.	Organization: August A. Busch Memorial Conservation Area, Missouri Department of Conservation
Telephone No: 636-300-1953 x 226 Fax No: E-Mail Address:		Street Address: 2360 Hwy D City, State, Zip: St. Charles, MO 63304
Summary Of Conversation		
<p>I contacted Joel Porath and notified him of the Weldon Spring Site's LTS&M annual inspection on October 26-28, 2010. I informed him that we would be on MDC property inspecting the Southeast Drainage, Burgermeister Spring, Spring 6303 and MW -4041. I discussed the pending institutional controls that DOE is working on with the MDC. I told Joel I would email him a copy of the agenda and that we had been keeping John Vogel informed of the inspection. I also informed him that DOE was conducting its CERCLA Five-Year Review for the site.</p> <p>Response to Five-Year Review Interview Questions:</p> <p>What is your overall impression of the Weldon Spring Site cleanup project (general sentiment)? It Has been good, with good communication. No negative outcome.</p> <p>What effects have the completion of the site cleanup project had on the surrounding community? Provided accessibility to areas no accessible before. Provides a good educational opportunity for people in the general community with the interpretive center.</p> <p>Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details. No new ones.</p> <p>How did you learn about the site? Manage land adjacent to the site.</p> <p>Do you feel well informed about the site's activities and progress? Yes.</p> <p>Do you have any comments, suggestions, or recommendations regarding the site's management or activities? Just continue with the inspection and open lines of communication.</p>		

INTERVIEW RECORD		
Site Name: Weldon Spring Site		EPA ID No.: MO6210022830
Subject: Annual Inspection		Time: 1:30pm Date: 10/25/10
Type: ___ Telephone <u> x </u> Visit ___ Other		Incoming ___Outgoing
Location of Visit: Interpretive Center		
Contact Made By:		
Name: Terri Uhlmeyer	Title: Compliance Manager	Organization: S.M. Stoller Corp.
Individual Contacted:		
Name: Yvonne Deyo	Title: Site Manager	Organization: S.M. Stoller Corp.
Telephone No: 636-300-0012 Fax No: 636-447-0739 E-Mail Address: yvonne.deyo@lm.doe.gov	Street Address: 7295 Hwy. 94 South City, State, Zip: St. Charles, MO 63304	
Summary Of Conversation		
<p>I interviewed Yvonne Deyo, the S.M. Stoller Site Manager at the Weldon Spring Site. The interviewing of the Site Manager is a requirement included in the Annual Inspection Checklist. Most of the interview questions were from the CERCLA Five-year Review Guidance.</p> <ol style="list-style-type: none"> 1. Current Status of the Project: Long-term surveillance and maintenance. 2. Any problems encountered with the remedies? None at this time. 3. Are the remedies functioning as expected? Yes. 4. Any vandalism or trespassing issues? As discussed in past Annual Inspection interviews, public use of the site is frequent. Nighttime access of the disposal cell viewing platform and other undesirable behaviors (littering, etc.) continue to be dramatically curtailed through a private security firm's seasonal patrol coverage of the site during evening hours and use of the safety-address system at the Interpretive Center. 5. What is the current on-site presence? Describe staff and activities. There are 9 full-time contractor employees and 9 part-time contractor and subcontractor employees. Activities include long-term surveillance and maintenance operations, project management, data evaluation, operation of the interpretive center, preparation of site-related regulatory documents, support in establishment of institutional controls, support of site IT and telephone issues, landscape management and general administrative support. On-site staff also provide support on other DOE sites such as Mound, Fernald, and Pinellas and to other projects such as Reuse and Property Management. Environmental sampling personnel support sampling activities at other sites in the Legacy Management system. 6. Are there any issues associated with the site at this time? None. 7. Any suggestions or comments regarding annual inspection? None. 		

INTERVIEW RECORD		
Site Name: Weldon Spring Site		EPA ID No.: MO6210022830
Subject: Annual Inspection		Time: 2:00 pm Date: 10/13/10
Type: <input checked="" type="checkbox"/> Telephone <input type="checkbox"/> Visit <input type="checkbox"/> Other		Incoming <input checked="" type="checkbox"/> Outgoing
Location of Visit:		
Contact Made By:		
Name: Terri Uhlmeyer	Title: Compliance Manager	Organization: SM Stoller, Corp.
Individual Contacted:		
Name: Mark Boehle	Title: Assistant Fire Chief	Organization: Cottleville Fire Dept
Telephone No: 636-447-6655 ext. 8703	Street Address: PO Box 385	
Fax No:	City, State, Zip: Cottleville, MO 63338	
E-Mail Address:		
Summary Of Conversation		
<p>I contacted Mark Boehle of the Cottleville Fire Department and informed him that DOE would be conducting the Long-Term Surveillance and Maintenance annual inspection at the Weldon Spring Site on October 26-28, 2010. I told him that as we discussed the last several years, DOE would be conducting this inspection every year and would use this call in the future to keep in contact with the Cottleville Fire Department and to find out if they have any concerns or issues. He said he did not know of any concerns at this time. I told him we had done a few prescribed burns and that the subcontractor had been required to contact the Cottleville Fire Dept. He stated that he was not aware of these. I told him the last one had been in March and that I would ensure he was notified of them in the future. I also informed him that DOE was conducting its CERCLA Five-Year Review for the site.</p> <p>Response to Five-Year Review Interview Questions:</p> <p>What is your overall impression of the Weldon Spring Site cleanup project (general sentiment)? Good, not any issues, the cleanup was conducted in a prudent manner and the communication has always been good.</p> <p>Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details. No</p> <p>How did you learn about the site? Through his job. The fire department was involved all through the cleanup.</p> <p>Do you feel well informed about the site's activities and progress? Yes.</p> <p>Do you have any comments, suggestions, or recommendations regarding the site's management or activities? No</p>		

INTERVIEW RECORD		
Site Name: Weldon Spring Site		EPA ID No.: MO6210022830
Subject: Annual Inspection		Time: 1:30 Date: 10/11/10
Type: <input checked="" type="checkbox"/> Telephone <input type="checkbox"/> Visit <input type="checkbox"/> Other		Incoming <input checked="" type="checkbox"/> Outgoing
Location of Visit:		
Contact Made By:		
Name: Terri Uhlmeyer	Title: Compliance Manager	Organization: SM Stoller, Corp.
Individual Contacted:		
Name: Marsha Miller	Title: Facility Manager	Organization: Army
Telephone No: 636-329-1200 ext. 2401	Street Address: 7301 Hwy. 94 South	
Fax No:	City, State, Zip: St. Charles, MO 63304	
E-Mail Address:		
Summary Of Conversation		
<p>I contacted Marsha Miller of the 88th Regional Readiness Command at the Weldon Spring Army site and notified her that DOE would be conducting the annual LTS&M inspection at the Weldon Spring Site on October 26-28, and that we would be on Army property on the morning of the 26th. I told her we would be driving around on the Army site and inspecting our wells and survey monuments and pins. She said we should check in at the gate and she would put us on their calendar. Marsha asked when we would be abandoning the monitoring wells on the army property and I told her we would get back to her on the specific dates. We discussed the reserve building currently being constructed and the plans to build a much larger reserve building in the future. I also informed Marsha that we are conducting are CERCLA Five-Year Review.</p> <p>Response to Five-Year Review Interview Questions:</p> <p>What is your overall impression of the Weldon Spring Site cleanup project (general sentiment)? Not familiar with the specific details.</p> <p>What effects have the completion of the site cleanup project had on the surrounding community? Not much of an effect. The site is remote</p> <p>Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details. No</p> <p>How did you learn about the site? Work next door.</p> <p>Do you feel well informed about the site's activities and progress? Yes.</p> <p>Do you have any comments, suggestions, or recommendations regarding the site's management or activities? Not at this time.</p>		

INTERVIEW RECORD		
Site Name: Weldon Spring Site		EPA ID No.: MO6210022830
Subject: Annual Inspection		Time: 9:00 am Date: 10/13/10
Type: <input checked="" type="checkbox"/> Telephone <input type="checkbox"/> Visit <input type="checkbox"/> Other		Incoming <input checked="" type="checkbox"/> Outgoing
Location of Visit:		
Contact Made By:		
Name: Terri Uhlmeyer	Title: Compliance Manager	Organization: SM Stoller, Corp.
Individual Contacted:		
Name: Pieter Sheehan	Title: Environmental Public Health Manager	Organization: St. Charles County
Telephone No: 636-949-7406	Street Address: 201 North Second Street, Suite 537	
Fax No:	City, State, Zip: St. Charles, MO 63301	
E-Mail Address: psheehan@sccmo.org		
Summary Of Conversation		
<p>I contacted Pieter Sheehan, Environmental Public Health Manager for St. Charles County. I explained that as discussed with him last year, DOE conducts an annual Long-Term Surveillance and Maintenance inspection each year and as part of the inspection we would be contacting certain stakeholders to maintain contact with them and to determine if they had any concerns or issues about the site. Our inspection this year is Oct. 26-28. Also noted that we had sent Mr. Sheehan the 30-day notification and copy of the agenda and he had emailed me that someone from his office would be attending. He informed me on the phone that he thought 2 people would be attending and he would possibly be one of the attendees. We talked about what would be required as far as foot gear, etc. I also informed him that DOE was conducting its CERCLA Five-Year Review for the site.</p> <p>Response to Five-Year Review Interview Questions:</p> <p>What is your overall impression of the Weldon Spring Site cleanup project (general sentiment)? None.</p> <p>Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details. No</p> <p>How did you learn about the site? From his employment</p> <p>Do you feel well informed about the site's activities and progress? Yes.</p> <p>Do you have any comments, suggestions, or recommendations regarding the site's management or activities? No</p>		

INTERVIEW RECORD		
Site Name: Weldon Spring Site		EPA ID No.: MO6210022830
Subject: Annual Inspection		Time: 1:20 pm Date: 10/18/10
Type: <input checked="" type="checkbox"/> Telephone <input type="checkbox"/> Visit <input type="checkbox"/> Other		Incoming <input checked="" type="checkbox"/> Outgoing
Location of Visit:		
Contact Made By:		
Name: Terri Uhlmeyer	Title: Compliance Manager	Organization: SM Stoller, Corp.
Individual Contacted:		
Name: Wayne Anthony	Title:	Organization: St. Charles Planning and Zoning Department
Telephone No: 636-949-7900 x7221		Street Address:
Fax No:		City, State, Zip:
E-Mail Address:		
Summary Of Conversation		
<p>I contacted Wayne Anthony of the St. Charles Planning and Zoning Department. Mr. Anthony had been the project's previous contact in this department in regards to the county's master plan. I informed Mr. Anthony that DOE would be conducting their annual LTS&M inspection on October 26-28 and I asked him if there were any planning and zoning activities currently in the one-quarter mile surrounding the chemical plant and quarry properties. Mr. Anthony verified that there were not any such activities in this area at this time. He said the only activity in the area was the new construction at the school.</p>		

INTERVIEW RECORD		
Site Name: Weldon Spring Site		EPA ID No.: MO6210022830
Subject: Annual Inspection		Time: 8:00 am Date: 10/27/09
Type: ___ Telephone <u> x </u> Visit ___ Other		Incoming ___Outgoing
Location of Visit: Weldon Spring Site		
Contact Made By:		
Name: Terri Uhlmeyer	Title: Compliance Manager	Organization: SM Stoller, Corp.
Individual Contacted:		
Name: Randy Thompson	Title: Data Manager	Organization: SM Stoller, Corp.
Telephone No: 636-926-7040 Fax No: 636-447-0803 E-Mail Address: randy.thompson@gjo.doe.gov	Street Address: Weldon Spring Site City, State, Zip:	
<p>I interviewed Randy Thompson, Data Manager at the Weldon Spring Site. The interviewing of the data manager is a requirement included in the Annual Inspection Checklist.</p> <ol style="list-style-type: none"> 1. What is the current status of data validation/reporting? Data validation and review is completed for data through June 2010. The data validation and review is being worked for samples collected during July through September 2010. 2. How is the data reported? After data validation and review, the qualification flags are applied and the data is then available on the LM/Weldon Spring website the next day. We continue to prepare data validation reports and the yearly data are summarized in the annual environmental report. 3. What is the current status of the data on the website? Are we meeting our 90-day commitment as stated in the LTSM? Yes, we are meeting our 90-day commitment. The data are reviewed and validated through June 2009 and are available online. The July through September 2010 data are being validated and will be released shortly. 4. Are there any trends that show contaminants increasing or decreasing? Trend analysis is performed annually and summarized for the Annual Site Environmental Report. 		

INTERVIEW RECORD		
Site Name: Weldon Spring Site		EPA ID No.: MO6210022830
Subject: Annual Inspection		Time: 12:20 pm Date: 10/28/10
Type: <input checked="" type="checkbox"/> Telephone <input type="checkbox"/> Visit <input type="checkbox"/> Other		Incoming <input checked="" type="checkbox"/> Outgoing
Location of Visit:		
Contact Made By:		
Name: Terri Uhlmeyer	Title: Compliance Manager	Organization: SM Stoller, Corp.
Individual Contacted:		
Name: Randy Carter	Title: Assistant Principal	Organization: Francis Howell High School
Telephone No: 636-851-4080 x4701	Street Address: 7001 Hwy 94 South	
Fax No:	City, State, Zip: St. Charles, MO 63304	
E-Mail Address:		
Summary Of Conversation		
<p>I contacted Randy Carter, the assistant principal of Francis Howell High School, as he had been my contact for the last 4 years, and explained that DOE would be conducting an annual Long-Term Surveillance and Maintenance inspection each year and as part of the inspection we contact certain stakeholders, such as the Francis Howell High School to maintain contact with them and to determine if they had any concerns or issues about the site. I had left Mr. Carter a voice mail on October 18 and I had informed him that this year our inspection would be October 26-28. He contacted me on October 28 and stated that they did not have any concerns at this time. I also reminded him of our interpretive center and that we were always available should any questions or concerns arise. I also informed him that DOE was conducting its CERCLA Five-Year Review for the site.</p> <p>Response to Five-Year Review Interview Questions:</p> <p>What is your overall impression of the Weldon Spring Site cleanup project (general sentiment)? They know it's there but don't have a definite impression.</p> <p>How did you learn about the site? From working next door and he keeps the information DOE sends him in his office.</p> <p>Do you feel well informed about the site's activities and progress? Yes. Receives the information from DOE frequently plus the annual inspection calls.</p> <p>Do you have any comments, suggestions, or recommendations regarding the site's management or activities? No</p>		

INTERVIEW RECORD		
Site Name: Weldon Spring Site		EPA ID No.:MO6210022830
Subject: Annual Inspection		Time: 11:00 am Date: 10/25/10
Type: <input checked="" type="checkbox"/> Telephone <input type="checkbox"/> Visit <input type="checkbox"/> Other		Incoming <input checked="" type="checkbox"/> Outgoing
Location of Visit:		
Contact Made By:		
Name: Terri Uhlmeyer	Title: Compliance Manager	Organization: SM Stoller, Corp.
Individual Contacted:		
Name: Cindy	Title:	Organization: Simplex/Grinnell
Telephone No: 888-746-7539	Street Address:	
Fax No:	City, State, Zip:	
E-Mail Address:		
Summary Of Conversation		
<p>I contacted Simplex/Grinnell, the alarm company for the project, and talked to Cindy. I verified that they had the correct three people as contacts and that they also had the correct work, home and cell number for each person.</p>		

INTERVIEW RECORD		
Site Name: Weldon Spring Site		EPA ID No.: MO6210022830
Subject: Annual Inspection		Time: 9:10 am Date: 10/18/10
Type: <input checked="" type="checkbox"/> Telephone <input type="checkbox"/> Visit <input type="checkbox"/> Other		Incoming <input checked="" type="checkbox"/> Outgoing
Location of Visit:		
Contact Made By:		
Name: Terri Uhlmeyer	Title: Compliance Manager	Organization: SM Stoller, Corp.
Individual Contacted:		
Name: Jim Hudson	Title: Captain	Organization: St. Charles County Sheriff Office
Telephone No: 636-949-7325	Street Address:	
Fax No: 636-949-7525	City, State, Zip:	
E-Mail Address:		
Summary Of Conversation		
<p>I contacted Captain Jim Hudson of the St. Charles County Sheriff's Office and informed him that the annual LTS&M inspection would be taking place on October 26-28, 2010. I had talked to Captain Hudson the last eight years and reminded him that we would be contacting the Sheriff's office annually to keep in contact with them and check to see if they had any issues or concerns. Captain Hudson said he did not know of any concerns at this time. I informed him that I had in years past discussed vandalism issues with fireworks and other items on the disposal cell. I also told him as I had last year that in addition to signs that said the cell was closed at night and that during the summer of 2007 we had hired a security firm to patrol on the weekends and one random week night and that the majority of the vandalism had been curtailed. I also informed him again that we had posted signs a couple years ago in the parking lot that stated "No High School or Commuter Parking" and our problems with the high school students driving excessively fast and dangerously in our parking lot had also been curtailed. Captain Hudson had assisted us with the high school parking issue and had provided the name of the school resource officer, etc. I also informed him that DOE was conducting its CERCLA Five-Year Review for the site.</p> <p>Response to Five-Year Review Interview Questions:</p> <p>What is your overall impression of the Weldon Spring Site cleanup project (general sentiment)? Thinks they did a great job.</p> <p>Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details. No</p> <p>How did you learn about the site? Grew up in the area.</p> <p>Do you feel well informed about the site's activities and progress? Yes. Get mailings and phone call every year.</p> <p>Do you have any comments, suggestions, or recommendations regarding the site's management or activities? No</p>		

INTERVIEW RECORD		
Site Name: Weldon Spring Site		EPA ID No.: MO6210022830
Subject: Annual Inspection		Time: 8:20 am Date: 10/25/10
Type: <input checked="" type="checkbox"/> Telephone <input type="checkbox"/> Visit <input type="checkbox"/> Other		Incoming <input checked="" type="checkbox"/> Outgoing
Location of Visit:		
Contact Made By:		
Name: Terri Uhlmeyer	Title: Compliance Manager	Organization: SM Stoller, Corp.
Individual Contacted:		
Name: Bill Wilcox	Title:	Organization: Missouri Department of Transportation
Telephone No: 636-441-8471	Address:	
Fax No:	City, State, Zip: St. Charles, Mo 63304	
E-Mail Address:		
Summary Of Conversation		
<p>I contacted Bill Wilcox of the Missouri Department of Transportation local office. I explained to Bill that DOE conducts an annual Long-Term Surveillance and Maintenance inspection each year and as part of the inspection we would be contacting certain stakeholders to maintain contact with them and to determine if they had any concerns or issues about the site. I informed Bill that our inspection this year would be on October 26-28. I informed him that I had contacted Kevin Wideman and he would be participating in the inspection. We discussed the coordination that had taken place earlier this year between MoDOT and DOE in regards to Stoller cutting off a portion of the Hwy 94 culvert and the future and ongoing coordination regarding the widening of Hwy D and subsequent removal of the Hwy D culvert. Bill said they didn't have any concerns at this time and I told him that if he or any of the workers in the office had any concerns or questions to give us a call and we would be glad to answer them and/or give them a tour of the interpretive center.</p>		

INTERVIEW RECORD		
Site Name: Weldon Spring Site		EPA ID No.: MO6210022830
Subject: Annual Inspection		Time: 10:15 am Date: 10/18/10
Type: <input checked="" type="checkbox"/> Telephone <input type="checkbox"/> Visit <input type="checkbox"/> Other		Incoming <input checked="" type="checkbox"/> Outgoing
Location of Visit:		
Contact Made By:		
Name: Terri Uhlmeier	Title: Compliance Manager	Organization: SM Stoller, Corp.
Individual Contacted:		
Name: Jim Gremaud	Title: St. Charles County Area Engineer	Organization: Missouri Department of Transportation
Telephone No: 636-240-5277	Address: 6780 Old Hwy. N	
Fax No:	City, State, Zip: St. Charles, Mo 63304	
E-Mail Address:		
Summary Of Conversation		
<p>I contacted Jim Gremaud of the Missouri Department of Transportation. I explained to Jim, as I had the previous year, that DOE conducts an annual Long-Term Surveillance and Maintenance inspection each year and as part of the inspection we would be contacting certain stakeholders to maintain contact with them and to determine if they had any concerns or issues about the site. I informed Jim that our inspection this year would be on October 26-28. Jim had been copied on the 30-day notification and the agenda. I informed him that I had contacted Kevin Wideman and he would be participating in the inspection. We discussed the coordination that had taken place earlier this year between MoDOT and DOE in regards to Stoller cutting off a portion of the Hwy 94 culvert and the future and ongoing coordination regarding the widening of Hwy D and subsequent removal of the Hwy D culvert. Jim said he might attend portions of the inspection.</p>		

INTERVIEW RECORD		
Site Name: Weldon Spring Site		EPA ID No.: MO6210022830
Subject: Annual Inspection		Time: 9:00 am Date: 10/11/10
Type: <input checked="" type="checkbox"/> Telephone <input type="checkbox"/> Visit <input type="checkbox"/> Other		<input type="checkbox"/> Incoming <input checked="" type="checkbox"/> Outgoing
Location of Visit: Weldon Spring Site		
Contact Made By:		
Name: Terri Uhlmeyer	Title: Compliance Manager	Organization: SM Stoller, Corp.
Individual Contacted:		
Name: John Vogel	Title: Area Manager	Organization: August A. Busch Memorial Conservation Area, Missouri Dept. of Conservation
Telephone No: 636-300-1953 ext. 318	Street Address: 2360 Hwy D	
Fax No:	City, State, Zip: St. Charles, MO 63304	
E-Mail Address:		
Summary Of Conversation		
<p>I contacted John Vogel, to notify him of the annual inspection that was going to take place on October 26-28, 2010. DOE had previously sent John a copy of the notification and agenda for the inspection. He said he planned to participate in the inspection of the Southeast Drainage. He said that the only hunting that would be going on, would be the possibility of squirrel hunters in the area. I asked John if he knew of any groundwater use in the planned groundwater restriction area that had taken place that would affect the future institutional controls in that area and he stated that there had not been any of this activity. He said he did not have any concerns at this time.</p> <p>Response to Five-Year Review Interview Questions:</p> <p>What is your overall impression of the Weldon Spring Site cleanup project (general sentiment)? Feel it has gone great, that it was a great project and am happy with the results.</p> <p>What effects have the completion of the site cleanup project had on the surrounding community? Huge benefit to the community in regards to the recreation aspect. The hikers and mountain bikers have good access to the Hamburg Trail and other conservation trails and property.</p> <p>Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details. No</p> <p>How did you learn about the site? Work next door.</p> <p>Do you feel well informed about the site's activities and progress? Yes.</p> <p>Do you have any comments, suggestions, or recommendations regarding the site's management or activities? No</p>		

INTERVIEW RECORD		
Site Name: Weldon Spring Site		EPA ID No.: MO6210022830
Subject: Annual Inspection		Time: 1:30 pm Date: 10/14/10
Type: <input checked="" type="checkbox"/> Telephone <input type="checkbox"/> Visit <input type="checkbox"/> Other		Incoming <input checked="" type="checkbox"/> Outgoing
Location of Visit:		
Contact Made By:		
Name: Terri Uhlmeier	Title: Compliance Manager	Organization: SM Stoller, Corp.
Individual Contacted:		
Name: Kevin Wideman	Title: Sr. Environmental Specialist	Organization: Missouri Department of Transportation
Telephone No: 573-526-4171	Address: P.O. Box 270	
Fax No:	City, State, Zip: Jefferson City, Mo 65102	
E-Mail Address:		
Summary Of Conversation		
<p>I contacted Kevin Wideman of the Missouri Department of Transportation. I discussed with Kevin that DOE conducts an annual Long-Term Surveillance and Maintenance inspection each year (which he attended the past 2 years) and as part of the inspection we would be contacting certain stakeholders to maintain contact with them and to determine if they had any concerns or issues about the site. I informed Mr. Wideman that our inspection this year would be on October 26-28. Kevin had been copied on the 30-day notification and the agenda. He stated that he planned to attend the first day of the inspection. We discussed the coordination between DOE and MoDOT regarding the Hwy 94 and Hwy. D culverts</p>		

INTERVIEW RECORD		
Site Name: Weldon Spring Site		EPA ID No.: MO6210022830
Subject: Annual Inspection		Time: 11:00 pm Date: 10/13/10
Type: <input checked="" type="checkbox"/> Telephone <input type="checkbox"/> Visit <input type="checkbox"/> Other		Incoming <input checked="" type="checkbox"/> Outgoing
Location of Visit:		
Contact Made By:		
Name: Terri Uhlmeier	Title: Compliance Manager	Organization: SM Stoller, Corp.
Individual Contacted:		
Name: Mary Bryan	Title: Real Estate Manager	Organization: MDNR-Parks
Telephone No: 573-751-7987	Street Address: PO Box 176	
Fax No:	City, State, Zip: Jefferson City, MO 65102	
E-Mail Address:		
Summary Of Conversation		
<p>I contacted Mary Bryan MDNR-Parks and explained as I discussed with her last year, DOE conducts an annual Long-Term Surveillance and Maintenance inspection each year and as part of the inspection we contact certain stakeholders to maintain contact with them, to discuss the ICs and to determine if they had any concerns or issues about the site. I informed Ms. Bryan that our inspection this year would be on October 26-28. I told her that I had also contacted Quinn Kellner. We discussed the progress that has been made concerning the institutional control in the form of an easement with MDNR-Parks and that the easement had actually been signed and finalized. Ms. Bryan stated that she did not have any concerns at this time.</p>		

INTERVIEW RECORD		
Site Name: Weldon Spring Site		EPA ID No.: MO6210022830
Subject: Annual Inspection		Time: 10:00 am Date: 10/19/10
Type: <input checked="" type="checkbox"/> Telephone <input type="checkbox"/> Visit <input type="checkbox"/> Other		Incoming <input checked="" type="checkbox"/> Outgoing
Location of Visit:		
Contact Made By:		
Name: Terri Uhlmeier	Title: Compliance Manager	Organization: SM Stoller, Corp.
Individual Contacted:		
Name: Quinn Kellner	Title: Natural Resource Manager Jones-Confluence State Park	Organization: MDNR-Parks
Telephone No: 636-899-1135	Fax No:	Street Address: PO Box 67
E-Mail Address:		City, State, Zip: West Alton, MO 63386
Summary Of Conversation		
<p>I contacted Quinn Kellner, MDNR-Parks and notified him of the LTS&M annual inspection at the Weldon Spring site on October 26-28, 2010. He had been previously notified by copy of the regulator 30-day notification letter and a copy of the agenda. He stated that he would not be attending the inspection this year and that he did not have any concerns. He attended the 2008 inspection and came familiar with the areas along the Katy Trail referenced in the DOE easement with MDNR-Parks.</p>		

INTERVIEW RECORD		
Site Name: Weldon Spring Site		EPA ID No.: MO6210022830
Subject: Annual Inspection		Time: 12:55 pm Date: 10/18/10
Type: <input checked="" type="checkbox"/> Telephone <input type="checkbox"/> Visit <input type="checkbox"/> Other		Incoming <input checked="" type="checkbox"/> Outgoing
Location of Visit:		
Contact Made By:		
Name: Terri Uhlmeyer	Title: Compliance Manager	Organization: SM Stoller, Corp.
Individual Contacted:		
Name: Tom Blair	Title: Assistant District Engineer	Organization: Missouri Department of Transportation
Telephone No: 314-453-1803 Fax No: E-Mail Address:	Street Address: 1590 Woodlake Dr. City, State, Zip: Chesterfield, Mo 63017	
Summary Of Conversation		
<p>I contacted Tom Blair of the Missouri Department of Transportation. I explained to Tom that as I had told him the past 5 years, DOE conducts an annual Long-Term Surveillance and Maintenance inspection each year and as part of the inspection we would be contacting certain stakeholders to maintain contact with them and to determine if they had any concerns or issues about the site. I informed Mr. Blair that our inspection this year would be on October 26-28. I told him that I had been in contact with Kevin Wideman and Jim Gremaud and he said they were the main ones to stay in contact with. We discussed the coordination that had taken place earlier this year between MoDOT and DOE in regards to Stoller cutting off a portion of the Hwy 94 culvert and the future and ongoing coordination regarding the widening of Hwy D and subsequent removal of the Hwy D culvert.</p>		

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