SET I.D.

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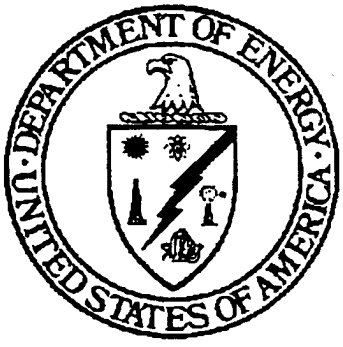
CONTRACT NO. DE-AC05-86OR21548

COMMUNITY RELATIONS PLAN

Weldon Spring Site Remedial Action Project
Weldon Spring, Missouri

FEBRUARY 1994 **REV. 7**



U.S. Department of Energy
Oak Ridge Operations Office
Weldon Spring Site Remedial Action Project

Prepared by MK-Ferguson Company and Jacobs Engineering Group

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Weldon Spring Site Remedial Action Project

Community Relations Plan

Revision 7

February 1994

Prepared by

MK-FERGUSON
and
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7295 Highway 94 South
St. Charles, Missouri 63304

for the

U.S. DEPARTMENT OF ENERGY
Oak Ridge Operations Office
Under Contract DE-AC05-86OR21548

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MK-FERGUSON A MORRISON KNUDSEN COMPANY Weldon Spring Site Remedial Action Project Contract No. DE-AC05-86OR21548	Rev. No. 7
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ABSTRACT

This Community Relations Plan fulfills a requirement for a public information and participation plan as a part of the Weldon Spring Site Remedial Action Project (WSSRAP). This plan documents how project community relations activities are conducted. The objective of the community relations program is to promote understanding of, and encourage informed participation in, the project by Federal, State, and local officials, the media, special interest groups, and the general public.

Mechanisms by which the project informs and involves the public include publications, public meetings and hearings, news releases, site tours, special events.

The site consists of a chemical plant where uranium and thorium were processed and an abandoned quarry that was once used as a disposal site for chemically and radioactively contaminated trash. A public water treatment plant is located about 1 mi northeast of the quarry. A military training area is immediately west of the chemical plant site.

Topographically, the site is situated in uplands dissected by small streams and valleys. The area straddles the divide between the Mississippi and Missouri river watersheds.

The community surrounding the site is mainly concerned about such issues as the potential for leukemia and cancer related to the contaminants on the site, the methods by which contaminants will be treated and materials released from the site, the suitability of the site for a permanent disposal cell, the potential for release of airborne contaminants during remedial action, and the potential for contamination of the well field.

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1 OVERVIEW OF THE PLAN

The Community Relations Plan, which fulfills the contractual requirement for a public information and participation plan, describes the Weldon Spring Site Remedial Action Project (WSSRAP) program for informing and involving the public in the cleanup of the Weldon Spring site in St. Charles County, Missouri, as prescribed by contract No. DE-AC05-860R21548, Attachment A, Statement of Work, Section 4.1.6.

This plan complies with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and is applicable to all aspects of the project. It documents how community relations activities are conducted in support of the WSSRAP mission. These activities include support for the preparation of:

1. Records of Decision (ROD) in accordance with the integrated National Environmental Policy Act (NEPA) and CERCLA process.

   To comply with CERCLA requirements when a ROD is being readied, the Community Relations Department is responsible for seeing that the following is done:

   - Responsiveness Summary. A responsiveness summary must be prepared and attached to each ROD. This summary must include U.S. Department of Energy (DOE) responses to comments received during the public comment period.

   - Public Notice. Public notices must be issued to announce the availability of RODs, explain the remedial actions, and describe the reasons for any significant changes from proposed plans.

   - Press Releases. Press releases should be issued announcing each ROD and the DOE's selection of a remedial action.

   Additional Activities

   - Public Meetings. Public meetings are required to invite public involvement in the decision process. Comments made at meetings by members of the public, and

comments submitted in writing within the public comment period (usually 30 days), are included in the RODs.

- Small Group Meetings. Small group meetings may be held to encourage discussion under circumstances that are less stressful than large public meetings.

- Special Events. Workshops, expositions, and open houses are held when appropriate.

- News Conferences. News conferences might be held to brief the media on the final selection of a remedial action and ROD, and to respond to questions.

- Briefings. Local officials may be briefed with specific information on a remedial action and on upcoming remedial design/remedial action activities.

- Summaries. Responsiveness summaries may be distributed to commentors.

To comply with NEPA requirements when a ROD is being readied, the Community Relations Department is responsible for seeing that the following is done:

- Advise the DOE to publish the ROD in the *Federal Register* and otherwise make it available to the public.

- Distribute the ROD to all interested and affected parties, and include it in the *Administrative Record.*

2. Findings of No Significant Impact (FONSI) in accordance with the environmental assessment process, and engineering evaluations/cost analyses in accordance with the interim response action process.

   - When a FONSI is prepared, the DOE must be advised of its obligation to notify the public of the availability of both the *Environmental Assessment* (EA) and the FONSI. The EA or a summary must be included in the FONSI.

This plan describes how the WSSRAP Community Relations Program meets the community relations requirements of these multiple, concurrent regulatory processes as effectively as possible.

The public has a right to know about proposed government actions and to participate in the planning of activities that influence their lives. The project will not only comply with the legal requirements for public participation, but will encourage an active role for citizens who live in or near affected communities. The project will ensure that State and local governments and other government agencies, as well as concerned individuals, participate in the process to ensure that the resulting decisions are made with full knowledge of the public's views.

The project will endeavor to establish a meaningful community dialogue on such matters as health concerns, environmental issues, remedial action construction plans, project costs, and specific site activities.

1.1 Objective and Purpose

The objective of the Community Relations Program is to promote understanding of the project by Federal, State, and local officials, the media, special interest groups, and the general public through timely and sufficient dissemination of factual information. This is intended to encourage informed participation in the project by appointed and elected public officials.

Public participation in the WSSRAP is not, however, limited to mechanisms that are formally required by law. The public is also involved informally through informational meetings, workshops, and open houses, publications, newsletters, fact sheets, site tours, and educational programs at area schools.

Public input assists project managers in making decisions that are both technically feasible and responsive to the community's concerns. Technical experts explain feasible alternatives, along with the advantages and disadvantages, so that the public can offer informed comments on various options.

The intent of the program is to inform the community and encourage public participation in the decision process.

1.2 Community Relations Program Definitions

The following sections describe WSSRAP policies on community relations and defines the scope, applicability, and responsibilities of the project participants with regard to community relations.

1.2.1 Policy

WSSRAP activities are conducted under an open information policy. All information concerning activities is unclassified and is released in a timely manner.

Because of the potential social, economic, and environmental impacts of the WSSRAP, the project has developed mechanisms to inform and involve the public. These include:

Publications

- Fact sheets describing engineering, design, construction, and environmental protection activities.
- Informational bulletins providing digest versions of technical documents.
- An eight-page biannual publication titled *WSSRAP Update* distributed to every home in St. Charles County via the *St. Charles Journal*.

Public Meetings and Hearings

- Held to solicit public input on recently released documents.
- Preceded by small group meetings.
- Prior announcement sent to local interest groups and elected officials.
- Notice of meetings placed in newspapers and *Federal Register*.

News Releases

- As directed by the DOE.
- Informational mailings of documents, availability notices, announcements, etc.

Site Tours

- Include 30-45 minute presentations on the site.
- Tours may be arranged for individuals or for groups of any size.

Special Events

- Open houses, workshops, news conferences, etc.
- Held as needed to inform the public about site activities or to keep the public active in site participation.

All public inquiries are answered thoroughly, and every effort is made to satisfy all public requests for information.

1.2.2 Scope and Applicability

The policies and implementation procedures of this manual will be used by all DOE field organizations involved in WSSRAP activities and all DOE laboratories, contractors, and subcontractors providing support or services to the project. This plan applies to the preparation and dissemination of technical, scientific, and environmental information by written means (technical reports, pamphlets, executive summaries, and newsletters); by visual means (films, video tapes, and slide presentations); and verbal means (briefings, public meetings, and testimony).

This plan also applies to activities that assist communities in developing methods for dealing with the impact of the project.

1.3 Compliance with the NEPA and CERCLA/SARA Process

The National Environmental Policy Act (NEPA) of 1969 requires an evaluation of the environmental impacts of major Federal actions that may significantly affect the environment. Public participation is an important part of this process. Throughout the series of measures necessary for compliance with these requirements, there are a number of formal provisions for participation by all interested parties, including other Federal agencies, State and local agencies, and the general public (including proponents and opponents of an action). These public

participation requirements are detailed in the Council on Environmental Quality (CEQ) Regulations (effective July 1979) for implementing the provisions of NEPA, and in the DOE guidelines of 1980 for NEPA compliance.

The response actions, i.e., removal actions and remedial actions, to be carried out by the DOE at the Weldon Spring site are subject to Environmental Protection Agency (EPA) oversight under the CERCLA, as amended by the Superfund Amendments and Reauthorization Act (SARA). For this project, the oversight function is being carried out by EPA Region VII. Because preparation of the draft Environmental Impact Statement (EIS) was already in progress when the EPA's role in the project was identified, the DOE and the EPA entered into a Federal Facility Agreement (FFA), whereby the respective responsibilities of these two agencies were defined. By this agreement, the DOE intended to meet the EPA's Remedial Investigation/Feasibility Study (RI/FS) requirements under CERCLA with the EIS and supporting documentation.

1.3.1 Public Participation in the RI/FS-EIS Process

By its decision to prepare an RI/FS-EIS, an agency sets in motion a series of actions that provide for public participation at several points throughout the course of these actions. At the WSSRAP, these actions, from the scoping process through the ROD, will be carried out with full public participation.

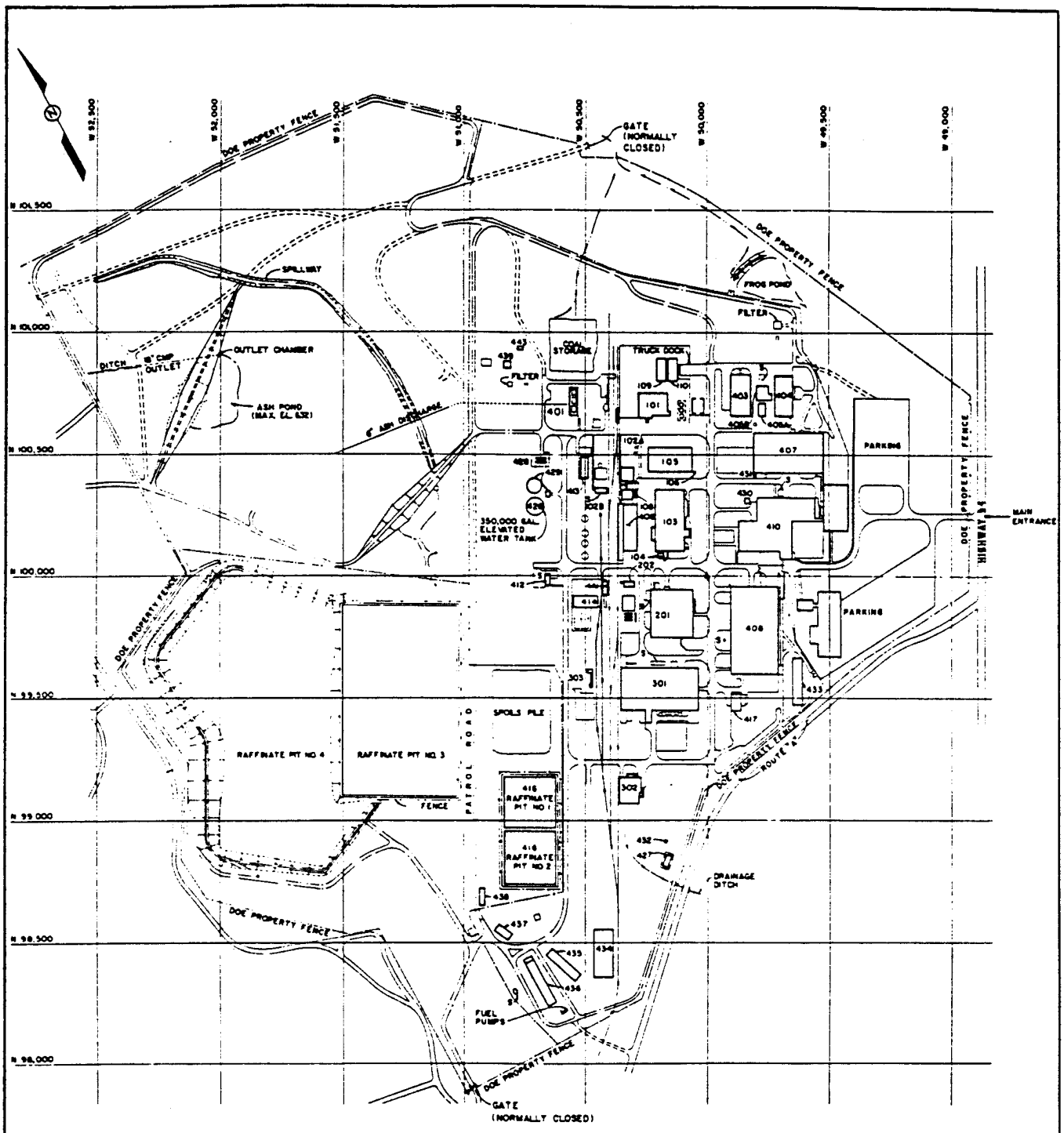
2 SITE BACKGROUND AND SETTING

2.1 Site Description

The 51-acre raffinate pits area at the Weldon Spring site contains four surface impoundments (the raffinate pits) which take up 26 acres of the area. These pits were constructed by excavating the existing clay formation and using the removed clay to construct dikes. The raffinate pits contain the residues from uranium and thorium processing operations previously conducted at the chemical plant. These residues are generally covered with water during the entire year. Ash Pond and Frog Pond are two additional surface water bodies in the chemical plant area. The 166-acre chemical plant originally consisted of 13 major buildings and approximately 30 support structures (see Figures 2-1 and 2-2).

The quarry was formed by the removal of limestone for building materials and covers about nine acres. The deepest part is filled with water covering about 0.5 acres and is the only surface water body within this controlled area. The layout of the quarry is shown in Figures 2-3 and 2-4. The quarry was used for disposal of a variety of wastes at different times during the operational period of the Weldon Spring site. A major source of potable groundwater in this area is the county well field located about 1 mi southeast of the quarry in the Missouri River alluvium. The nearest well is located about 0.5 mi from the quarry.

The Weldon Spring site is located within the St. Louis metropolitan area in St. Charles County. The St. Louis metropolitan area has a population of 2.5 million. The communities of Weldon Spring and Weldon Spring Heights are located approximately 2 mi from the chemical plant and raffinate pits area and have a combined population of about 1550. Francis Howell High School is located about 0.5 mi east of the raffinate pits and chemical plant area on State Route 94. The school has a year-round school year with an estimated 2,300 persons on campus when school is in session. St. Charles County has been experiencing a rapid population growth in the last few decades. The 1990 population of 213,000 represented a 67% increase over the 1980 population.



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SCALE

WELDON SPRING CHEMICAL PLANT
PLAN VIEW

FIGURE 2-1

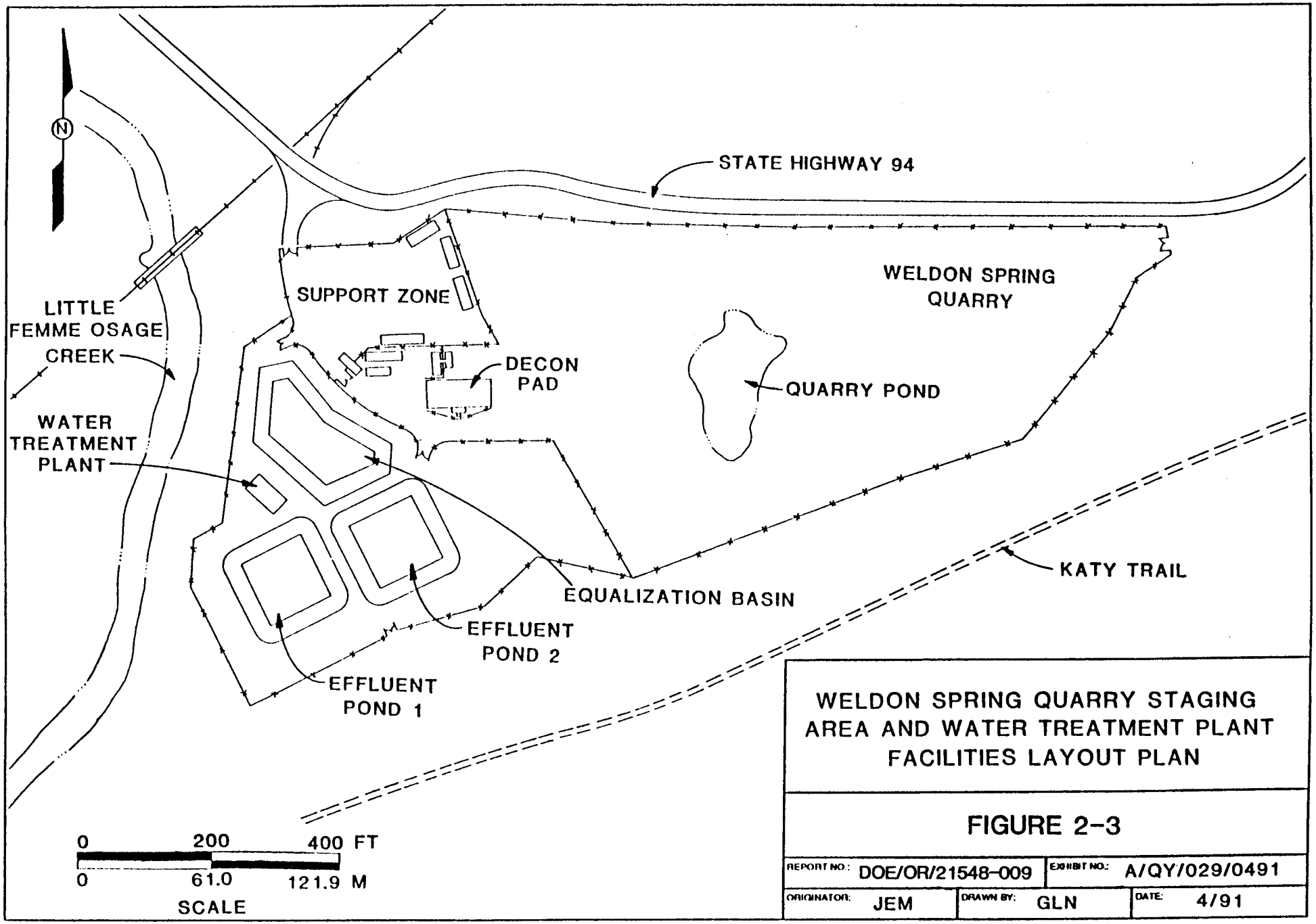
REPORT NO.	DOE/OR/21548-009	EXHIBIT NO	A/CP/106/0491		
ORIGINATOR	JEM	DRAWN BY	GLN	DATE	4/91

BUILDING OR AREA	DESIGNATION
101	FEED PREPARATION AND SAMPLING PLANT
102A	REFINERY TANK FARM
102B	REFINERY TANK FARM
103	DIGESTION AND DENITRATION
104	LIME STORAGE
105	TBP AND ETHER EXTRACTION
106	PROOF SAMPLER
108	NITRIC ACID RECOVERY
109	DRUM STORAGE
110	DRUM STORAGE
201	GREEN SALT PLANT
202	GREEN SALT TANK FARM
301	METALS PLANT
302	MAGNESIUM STORAGE BUILDING
303	CHIP STORAGE
401	COAL FIRED BOILERS
403	CHEMICAL PILOT PLANT
404	METALLURGICAL PILOT PLANT
405A	PILOT PLANTS AUXILIARY
405B	PILOT PLANT AUXILIARY
406	WAREHOUSE
407	LABORATORY
408	MAINTENANCE AND STORES
410	SERVICES
412	ELECTRICAL SUBSTATION
413	COOLING TOWER AND PUMP HOUSE
414	SCRAP CLASSIFICATION AND EQUIPMENT STORAGE
415	CLAY BRICK INCINERATOR
416	RAFFINATE PITS 1 & 2
417	PAINT SHOP
426	ELEVATED WATER TANK
427	PRIMARY SEWAGE TREATMENT PLANT
428	PROPANE AND BUTANE GAS PLANT
429	RESERVE WATER FACILITIES
430	AMBULANCE GARAGE
431	PROOF SAMPLER
432	PROOF SAMPLER
433	STORAGE
434	CONTAINERIZED WASTE STORAGE
435	STORAGE
436	STORAGE
437	STORAGE
438	STORAGE
439	FIRE TRAINING
441	CYLINDER STORAGE
443	FIRE TRAINING STORAGE

WELDON SPRING CHEMICAL PLANT
BUILDING/AREA DESIGNATION

FIGURE 2-2

REPORT NO	DOE/OR/21548-009	EXHIBIT NO	A/CP/107/0491		
ORIGINATOR	JEM	DRAWN BY	GLN	DATE	4/91



WELDON SPRING QUARRY STAGING AREA AND WATER TREATMENT PLANT FACILITIES LAYOUT PLAN

FIGURE 2-3

REPORT NO.:	DOE/OR/21548-009	EXHIBIT NO.:	A/QY/029/0491		
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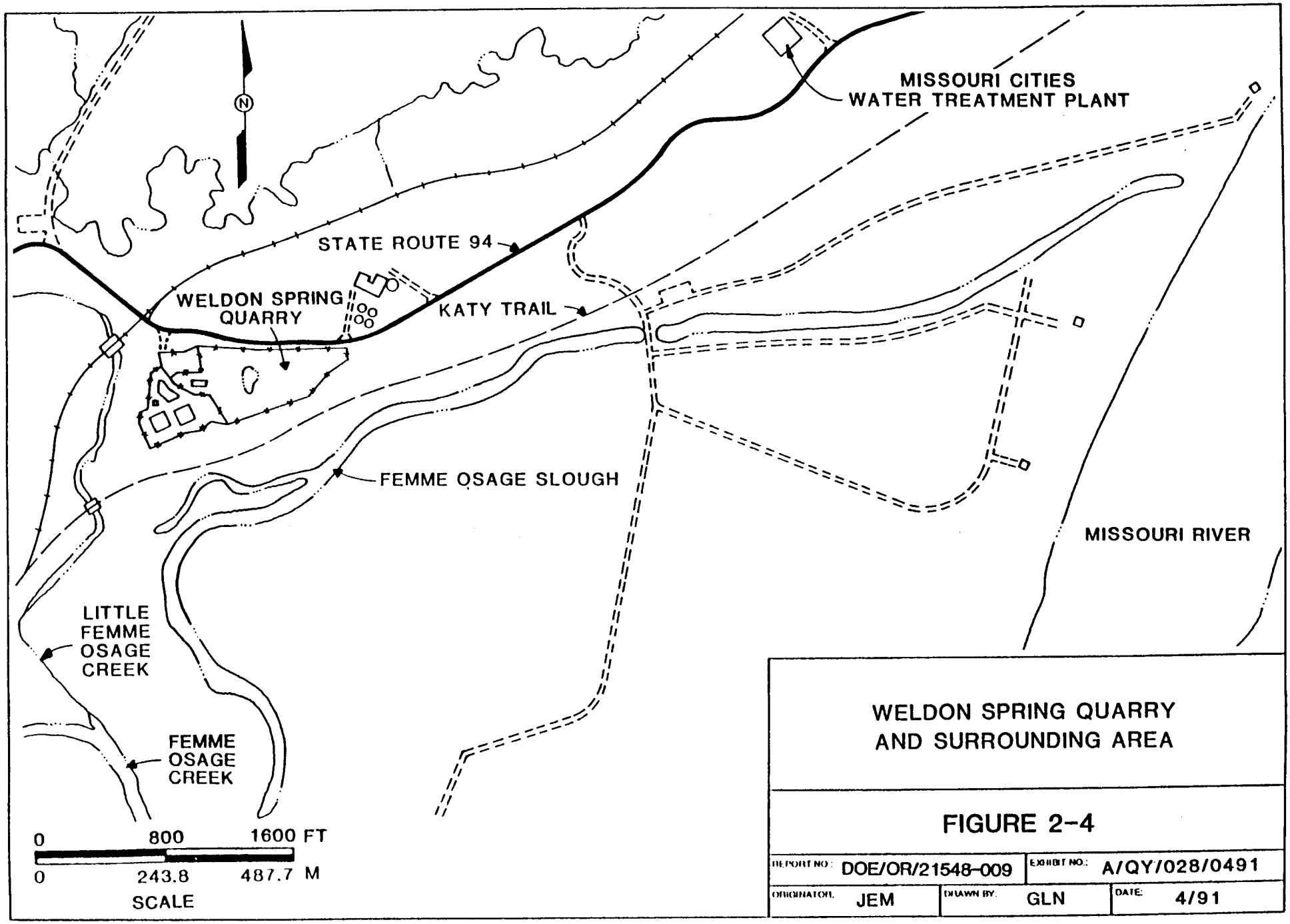

WELDON SPRING QUARRY
AND SURROUNDING AREA

FIGURE 2-4

REPORT NO:	DOE/OR/21548-009	EXHIBIT NO:	A/QY/028/0491		
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2.2 Site History

In 1941, the U.S. Department of the Army acquired about 17,000 acres of land in St. Charles County, Missouri, where it constructed the Weldon Spring Ordnance Works. Atlas Powder Co. operated the ordnance works for the Army as a trinitrotoluene (TNT) and dinitrotoluene (DNT) explosives production facility from November 1941 through January 1944. The ordnance works was closed and declared surplus to Army needs in April 1946. By 1949, all but about 2,000 acres had been transferred to the State of Missouri (the August A. Busch Memorial Wildlife Area) and the University of Missouri (agricultural research land). A large portion of the land transferred to the University of Missouri is now included in the Weldon Spring Wildlife Area. Except for several small parcels transferred to St. Charles County, the remaining property became the current Weldon Spring site and the adjacent U.S. Army Reserve and National Guard Training Area.

Through a memorandum of understanding between the Secretary of the Army and the General Manager for the Atomic Energy Commission (AEC) in May 1955, 205 acres of the former ordnance works was transferred to the AEC for construction and operation of the Weldon Spring Uranium Feed Materials Plant. Considerable explosives decontamination was performed prior to construction of the plant. The feed materials plant processed uranium and thorium ore concentrates from 1957 to 1966, with the Uranium Division of Mallinckrodt Chemical Works acting as the AEC operating contractor.

During plant operations, uranium ore concentrates and recycled scrap were processed to produce uranium trioxide, uranium tetrafluoride, and uranium metal; an average of 16,000 tons of uranium materials was processed per year. In addition, a limited amount of thorium ore concentrates was processed at the plant. These processes generated several chemical and radioactive waste streams, including raffinates from the refinery operation and magnesium fluoride slurry (washed slag) from the uranium recovery process. These streams were slurried to the raffinate pits where the solids settled out and the supernatant liquids were decanted to the plant process sewer; this sewer drained off-site to the Missouri River. The solids remaining in the pits consist of silica and other insoluble metals and oxides associated with the uranium ore feed materials, hydroxides and other precipitates formed from lime neutralization of the raffinates, and washed slag residues from uranium metal production.

The AEC closed the feed materials plant in December 1966, and in August 1967, the plant was selected as the site for an herbicide production facility. The AEC granted a license to the Army for the radioactive source material that was present as contamination throughout the site. On December 31, 1967, the feed materials plant was transferred to the Kansas City District of the U.S. Army Corps of Engineers for design and construction of the herbicide facility. Excluded from the transfer were custody and control of the source and special nuclear material stored in the four raffinate pits. Because the AEC did not elect to remove the source and special nuclear material, the 51 acres on which the raffinate pits are located were transferred back to the AEC in December 1971.

Decontamination and dismantling operations at the feed materials plant, now referred to as the chemical plant, were initiated for the Army in January 1968 by Thompson-Stearns-Roger Corporation to allow for construction of the herbicide facility. However, the extensive decontamination effort and associated costs required to meet radiological contamination limits imposed on the facility, combined with a reduction in the military's requirements for herbicides, resulted in cancellation of the project on February 4, 1969. The cancellation occurred before any processing activities were initiated. The Army retained responsibility for the land and facilities at the chemical plant.

National Lead Company of Ohio (NLO) was contracted by the AEC to perform environmental monitoring and maintenance of the raffinate pits and quarry. Bechtel National, Inc.—under contract to the DOE—assumed management responsibility for the raffinate pits and quarry from NLO in October 1981. In November 1984, the DOE was directed by the Office of Management and Budget to assume custody and accountability for the chemical plant. This transfer occurred on October 1, 1985. The site is currently under control of the DOE and its project management contractor, MK-Ferguson Company.

2.3 Environmental Setting

The chemical plant site is located on the Missouri-Mississippi River surface drainage divide. Drainage from the southern portion of the area travels southeast to the Missouri River. Most surface water runoff, however, discharges either through an intermittent stream in the Army Reserve Training Area or through the Ash Pond diversion structure to Schote Creek. Schote Creek joins with Dardenne Creek and flows northeast to the Mississippi River. Schote Creek and several of its tributaries are impounded on the August A. Busch Memorial Wildlife Area which is accessible to the public for recreational activities, such as fishing.

2.3.1 Physical Setting

The Weldon Spring site includes two distinct physiographic regions. The raffinate pits/ chemical plant area is situated at the southern edge of the dissected till plains of the Central Lowlands Physiographic Province. Part of the raffinate pits and chemical plant area is covered with buildings and ponds, and the remainder is covered with vegetation (predominantly grasses, shrubs, and small trees), gravel, or paved surfaces. The August A. Busch Memorial Wildlife Area is located to the north, the Weldon Spring Wildlife Area to the south and east, and the U.S. Army Reserve and National Guard Training Area to the west of the Weldon Spring site. Vegetation consists largely of grasses, shrubs, and small trees. The quarry is located about 4 mi south-southwest of the raffinate pits and chemical plant area on the northern flank of the Salem Plateau of the Ozark Plateau Physiographic Province. The deepest portion of the quarry is filled with water. Figure 2-5 shows the general location of the chemical plant and the quarry.

The Missouri River is located approximately 1.5 mi southeast of the raffinate pits and chemical plant area and 1 mi east of the quarry. At its closest point to the Weldon Spring site, the Mississippi River lies about 14 mi north of the raffinate pits and chemical plant area and about 18 mi north of the quarry.

2.3.2 Topography and Site Drainage

The Weldon Spring site is located in the southwest portion of St. Charles County. The county, roughly triangular in shape, is bounded by the Mississippi River on the north and east and the Missouri River on the south. Approximately half of the county land is floodplain and

half is uplands characterized by gently rolling topography. The southwest uplands, where the site is located, are dissected by small streams and valleys.

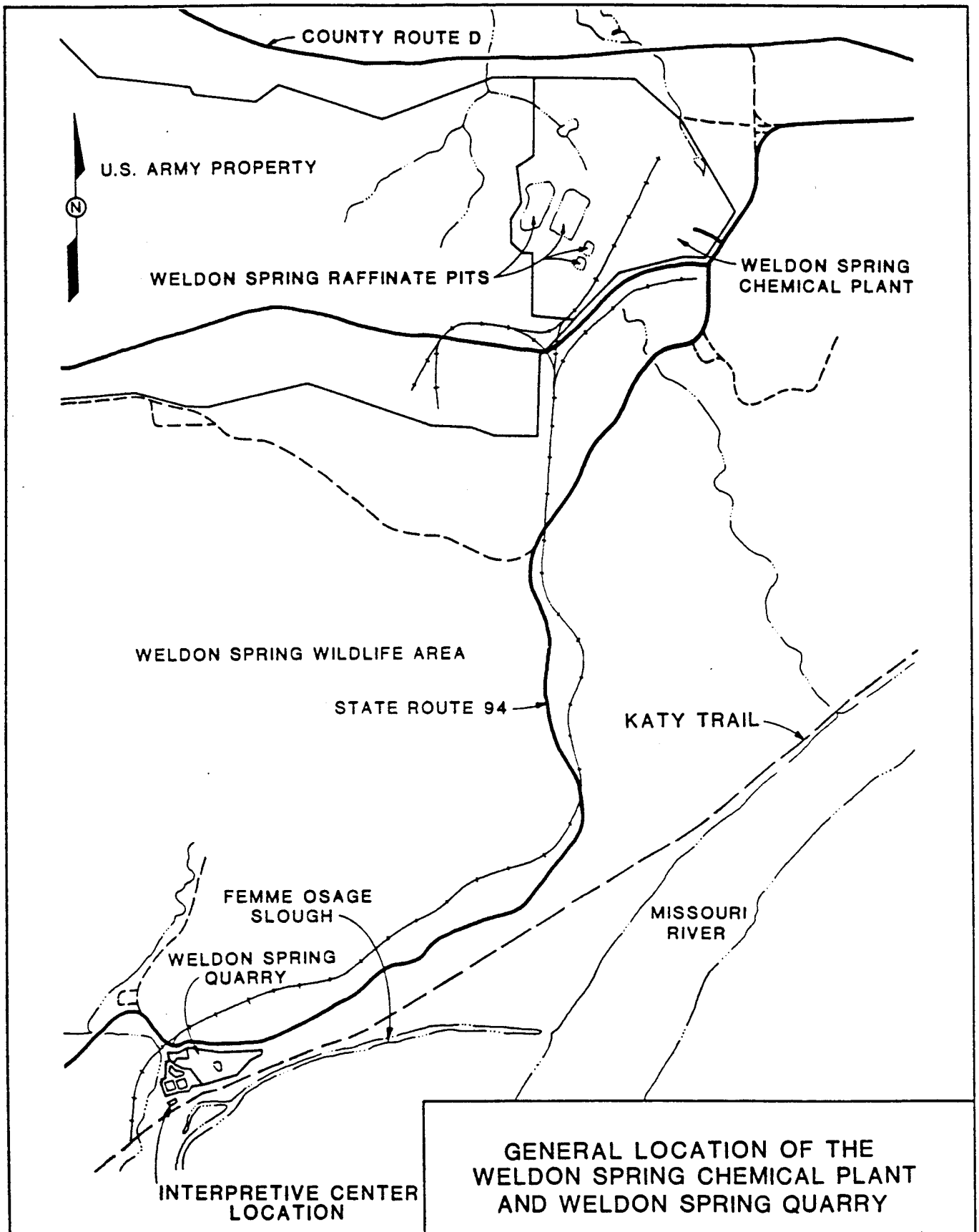
The raffinate pits and chemical plant area straddles the divide that separates the Mississippi and Missouri river watersheds. Gently rolling topography characterizes areas to the north and west, whereas the terrain to the south and east is heavily wooded, rugged, and ravined. Elevations range from approximately 610 ft mean sea level (MSL) near the northern edge of the raffinate pits and chemical plant area to approximately 670 ft MSL near the southern edge.

Drainage and the migration of contaminants are influenced by pits, buildings, drainage ditches, and other man-made features as well as by ponds and other surface features, including remnants of a channel through the Ash Pond area.

Most surface drainage from the raffinate pits area discharges either via intermittent streams in the Army Reserve Training Area to the west or into Ash Pond in the chemical plant area. Discharges from the intermittent streams and Ash Pond combine near County Route "D" and flow northward into Schote Creek; from there they enter Dardenne Creek, which discharges into the Mississippi River. An additional surface drainage system reaching the Mississippi River exits the chemical plant area from Frog Pond. This pond drains storm water from most of the chemical plant area (via the storm water sewer). Surface water flow from the northeastern edge of the chemical plant also drains to Frog Pond.

Drainage from the southern portion of the chemical plant area flows southeast to the Missouri River. As flows occur, a portion enters the subsurface; this flow re-emerges farther downstream either in springs or in the stream channel. The drainage originates from two sources. The first is the sanitary sewer system for the chemical plant. Although this system was taken out of service in 1986, it still receives some flow from the storm water runoff system. The sanitary system drain pipe merges with the chemical plant process sewer, which is also unused. The second source of southeast drainage flow is overland flow from the southern portion of the chemical plant area during precipitation events.

The limestone quarry is southwest of the raffinate pits and chemical plant area and borders the Missouri River alluvial floodplain. The surrounding topography, except the



GENERAL LOCATION OF THE WELDON SPRING CHEMICAL PLANT AND WELDON SPRING QUARRY

FIGURE 2-5

REPORT NO.	DOE/OR/21548-009	EXHIBIT NO	A/VP/045/0491
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floodplain area to the south, is rugged and heavily wooded and is characterized by deep ravines. The quarry floor and rim are at an elevation of about 450 and 550 ft MSL, respectively.

Drainage in the quarry area occurs primarily through the subsurface, with limited surface drainage on the southern rim. The quarry drainage flows to the Missouri River, 1 mi to the east, through Femme Osage Creek and Little Femme Osage Creek. About 700 ft south of the quarry is a 1.5-mi section of the original Femme Osage Creek that was dammed at both ends by the University of Missouri between 1960 and 1963. This section is now called the Femme Osage Slough. The water level of the slough is affected by the levels of the Missouri River and the groundwater. The average water level is about 450 ft MSL. The St. Charles County well field is located between the Femme Osage Slough and the Missouri River.

2.3.3 Geology and Hydrology

Groundwater and surface water movement is primarily determined by geology and hydrology. Contaminant transport is influenced by the chemical properties of the contaminants and components of the hydrogeology. Two primary mechanisms contribute to the transport of contaminants to the groundwater: (1) leaching and seepage from the surface and near surface sources through the unsaturated zone into the groundwater, and (2) infiltration of surface water into the groundwater in streams and surface water features.

Geology

- The Weldon Spring chemical plant and raffinate pits are situated at the southern edge of a major glacial land form feature known as the Dissected Till Plains.
- The surface of the area is covered entirely by unconsolidated materials (overburden) consisting primarily of topsoil, loess (wind blown silt), glacial sediments, and residuum (severely weathered limestone).
- No faults cross the site.
- The bedrock formations lie relatively level.

- The Eureka-House Springs Anticline, the nearest major structural feature, is located approximately 4 mi to the southeast.

- The Mississippian Age Burlington-Keokuk Limestone is the uppermost bedrock unit underlying the site.

- The upper 10-50 ft of the Burlington-Keokuk Limestone is weathered, contains abundant fossils, is slightly fractured, yellowish to brownish-gray to gray in color, and contains up to 60% chert (compact rock of microcrystalline quartz).

- The deeper section of the Burlington-Keokuk Limestone is not weathered. It is also fossiliferous, with infrequent fractures, is gray and massive, and contains 20%-40% chert.

Hydrology

- The Weldon Spring site is located on the surface drainage divide between the Mississippi and Missouri rivers.

- Four raffinate pits and one perennial pond (Frog Pond) with standing surface water are on the site. A sixth impoundment, Ash Pond, may dry up during low precipitation periods.

- Depths to groundwater at the site and in surrounding areas vary, but average 30-65 ft below the ground surface. Groundwater is present mainly in consolidated bedrock.

- Several aquifer tests have been performed to determine aquifer properties and characteristics of the Burlington-Keokuk Limestone at the site.

- Groundwater flow in the saturated portion of the Burlington-Keokuk Limestone occurs mostly as diffuse flow, but some localized components of discrete flow have been identified.

a) Diffuse flow is that component of groundwater flow that is contained in intergranular pores or within closely spaced fractures and bedding planes.

b) Discrete (or conduit flow) is at a much higher velocity than diffuse flow. The flow is within fractures or solution-enlarged openings.

- Groundwater flow directions in the shallow bedrock are influenced by a groundwater divide at the site. North of this divide, flow is to the north while south of the divide, flow is to the south-southeast.

- Groundwater has become contaminated as a result of ordnance production during WWII and from uranium processing activities in the 1950s and 1960s.

- The extent and magnitude of contamination has been defined with respect to destination.

Geologic and hydrogeologic studies in support of the RI/FS-EIS began at the site in 1987.

2.3.4 Quarry

The quarry is located on the Missouri River (southern) side of the drainage divide. Surface streams in the vicinity of the quarry include Femme Osage Creek, Little Femme Osage Creek, an unnamed tributary to Little Femme Osage Creek, and Femme Osage Slough. The Missouri River bottom at the quarry (river mile 49 from the confluence with the Mississippi River) is at an elevation of about 422 ft MSL. Although the floodplain area below the quarry is partially behind a levee, the area floods occasionally to a depth of about 3-4 ft and takes 1 to 2 months to dry; it is drained by a 16-in. diameter pipe through the levee.

2.3.5 Buildings, Structures, and Other Facilities

Numerous buildings and structures associated with former ordnance works activities have been demolished or removed from the chemical plant area. The remaining buildings, facilities, and structures were used to support the chemical plant operations. Additional demolition and decontamination activities were conducted after operations ceased.

3 COMMUNITY BACKGROUND

3.1 Local Land Use

The two nearest communities to the site are Weldon Spring and Weldon Spring Heights, which are located about 2 mi northeast of the raffinate pits and chemical plant area. The combined population of these two communities is approximately 1550.

Development in the county has been dynamic in the past, and strong residential and commercial/industrial demands are expected to continue. The cities of St. Charles, St. Peters, O'Fallon, Lake St. Louis, and Wentzville are located along I-70 where major development has occurred. The area south of I-70 from St. Charles to Wentzville and bounded by U.S. 40/61 to the west and the recently abandoned Missouri-Kansas-Texas (MKT) Railroad to the south is locally referred to as the "Golden Triangle." This area is considered likely to experience the most growth in the coming decades. The Golden Triangle includes the communities of St. Charles, St. Peters, O'Fallon, Lake St. Louis, Wentzville, Weldon Spring, Weldon Spring Heights, Cottleville, Harvester, Dardenne, and All Saints Village. In addition to development within the Golden Triangle, there is substantial development potential in other areas of the county.

The August A. Busch Memorial Conservation Area is located to the north and the Weldon Spring Conservation Area to the south and east of the raffinate pits and chemical plant area. Both of these wildlife areas are park-like tracts administered by the Missouri Department of Conservation and are dedicated to various kinds of recreational uses.

The University of Missouri operates the St. Charles County Extension Center and owns 740 acres of land to the east of the raffinate pits and chemical plant area. This land is currently used for pasture, but about 250 acres are being developed as a high-technology research park, which will remain under ownership of the University of Missouri. The purpose of the research park is to help stimulate the development of high-technology industries in the St. Louis area. A State of Missouri highway maintenance facility and Francis Howell High School are also located east of the raffinate pits and chemical plant area along State Route 94.

The St. Charles County water treatment plant is located on State Route 94 about 1 mi northeast of the quarry. The design capacity of this treatment plant is 16 million gal/day, and

it is currently processing about 20 million gal/day from the county well field. Five workers operate three shifts seven days per week at the treatment plant, with three operators during the first shift and one operator during each of the other two. In summer, two additional workers are hired to perform various jobs at both the water treatment plant and the nearby county well field. Subcontract personnel are utilized at the treatment plant as needed.

The U.S. Army Reserve and National Guard Training Area is located immediately west of the raffinate pits and chemical plant area. No permanent personnel are currently assigned to the training area, although one individual performs such duties as answering the telephone and checking the grounds. Regular weekend training occurs at reduced levels compared to normal training operations at other facilities because certain activities (e.g., digging foxholes) are not permitted.

3.2 Community Issues and Concerns

Leukemia and Cancer

Many individuals, including some medical personnel at area hospitals, believe that an unexplained increase in the childhood leukemia death rates in the 1970s in St. Charles County can be directly linked to the Weldon Spring site and work activities performed there. A study performed by the Missouri Department of Health determined that there was no correlation between the temporary increase in the childhood leukemia rates and the Weldon Spring site, but this study has been called inconclusive, at best, by some area residents. Fear of cancer rates increasing during remedial action remains the highest concern. It has resulted in most of the comments received at an earlier Draft Environmental Impact Statement (DEIS) meeting calling for moving Francis Howell High School during remedial action and building a new high school.

Water Treatment and Release

A number of St. Louis County residents who are not normally interested in the activities at the Weldon Spring site feel they have cause for concern about the release of treated water from the quarry and chemical plant into the Missouri River. Their concerns stem from the misunderstanding of water treatment and removal of radioactive contaminants from the water. Some residents choose not to drink the water during the times of discharge. They fear that some

of the contaminants may not be detected before the water is released. Opponents would like to see the site treat and hold the water until a better technology is available.

Outside Waste

In 1982, the U.S. Department of Energy (DOE) attempted to make the Weldon Spring site a regional disposal site for low-level radioactive waste. More than 2,000 people turned out for a public meeting at which they condemned this plan. The DOE subsequently withdrew it. The public remains concerned that the DOE is still planning to ship radioactive waste from sites in St. Louis to Weldon Spring. In fact, one individual related that the DOE would not spend so much money just to dispose of the waste from the Weldon Spring site alone.

Off-Site Disposal

Prior to the DEIS public hearing, a billboard on Interstate 70 near the site read: "Stop a Radioactive Waste Dump from Being Built in Your Back Yard." Many individuals in the community believe that the waste should be shipped elsewhere. During the hearing, comments were received that insufficient consideration was given to off-site disposal.

The Best Available Technology

Opinions have been expressed by some individuals in the community that cost should not be considered as a factor in any cleanup decision. One individual observed that if the community had to live with a permanent disposal facility, it should have the best safeguards that modern technology could supply, regardless of cost.

Suitability of Site

Many individuals in the community believe that the Weldon Spring site does not have an area that can safely house a permanent disposal cell. The concern is based on the belief that the ground underlying the Weldon Spring site is full of sinkholes, caves, and conduits which over time, would provide a pathway for radioactive contamination to enter the groundwater and threaten community safety and health.

Airborne Contaminant Release During Remedial Action

Many comments received by the WSSRAP Community Relations Department express concern about releases of airborne contaminants from the site to nearby communities.

Contaminating of the St. Charles County Well Field

There is concern that the proximity of the Weldon Spring quarry will jeopardize the well field since it is less than 0.5 mi from the closest well.

Distrust of the Federal Government

There is a concern in the community dating back to World War II that the Federal Government cannot be trusted. Many in the community believe that the Federal Government unjustly took their farmland to build the original Weldon Spring Ordnance Works, and this distrust apparently has been passed to subsequent generations.

Earthquakes and the New Madrid Fault

Many in the community believe that the New Madrid Fault will cause an earthquake in the area. They believe there can be no engineered alternative that will protect a disposal cell from being compromised in the event of such an earthquake.

Employing Union/Local Workers

Local union officials have criticized the site for hiring non-local and non-union Subcontractors. During the December 16, 1992, public hearing in St. Charles concerning the proposed plan for the final treatment and disposal of waste at the site, several union workers and representatives made comments to the effect that they want a higher proportion of the jobs at the site. They have also expressed the theory that a union worker is better qualified than a non-union worker. Local union officials have approached State and Federal elected officials for assistance in their efforts. Part of the problem appears to be that local firms are not routinely bidding on WSSRAP contracts.

Availability of Funds

There is a community fear that Federal funds allocated to the site for the cleanup might be taken away before the project is complete.

4 HIGHLIGHTS OF PROGRAM

4.1 The Public Information Office Oak Ridge Operations

The U.S. Department of Energy (DOE) Public Affairs Office at Oak Ridge reviews major Weldon Spring Site Remedial Action Project (WSSRAP) interactions with Federal, State, and local officials, the media, special interest groups, and the general public, and coordinates these interactions with appropriate DOE Headquarters offices.

The Public Affairs Office, through the WSSRAP Office and DOE Contractors, is kept apprised of public relations efforts that affect the site and surrounding communities. All press releases must be approved by the Oak Ridge Public Affairs office.

The WSSRAP Office is responsible for media relations including arranging for and conducting special briefings, press releases, and media representation at public meetings and hearings.

4.2 Contractors

DOE Contractors identify the need for, and assist the DOE in, arranging briefings with special interest groups; Federal, State, and local governments; and interested citizens. The Project Management Contractor (PMC) coordinates and facilitates these activities upon approval and under the direction of the WSSRAP Project Manager.

In addition, the DOE receives assistance in the preparation, reproduction and distribution of public information including testimony, presentations, special reports, and press kits. Lists of government officials, media, special interest groups, and community leaders are maintained.

5 PUBLIC INFORMATION AND PARTICIPATION ACTIVITIES

The following actions comprise some, but not all, of the activities that are undertaken by the Weldon Spring Site Remedial Action Project (WSSRAP) Community Relations Department in order to fully inform and involve the public.

5.1 Printed Materials

Printed materials are intended to provide easily understood information on all aspects of the WSSRAP (DOE Order 1430.1C). Types of materials include project documents, fact sheets, brochures, papers on specific issues and inquiries, the *WSSRAP Update*, informational bulletins, summaries of published documents, and news articles. The WSSRAP *Update* is published for, and distributed to, St. Charles County residents who receive the Sunday *Suburban Journal*.

A distribution list for WSSRAP publications with addresses for community contacts, public officials, and key off-site State and Federal personnel is updated periodically by the Community Relations Department.

5.2 Audiovisual Programs

Audiovisual programs provide accurate updated information about the WSSRAP. A variety of visual presentation methods are utilized including video tapes and slide presentations. These materials provide a format which can be kept continually updated and used for a wide variety of audiences (DOE Order 1350.1).

5.3 Speakers Program

It is often appropriate that public speakers from the WSSRAP be used to respond to requests from the public. Employees of the WSSRAP Office and Contractors are selected for their ability to present the facts and answer questions clearly and knowledgeably.

5.4 Document and Information Availability

The DOE has established a policy of ensuring that all published information about the WSSRAP is readily available to the public. Documents and informational bulletins are available

at local libraries and other appropriate locations that are open to the public. The availability of documents and information materials is publicized through press releases, advertisements, and specialized local mailings.

5.4.1 Public Reading Room

A reading room has been established at the site for easy access by the public. This center contains up-to-date information and background on WSSRAP activities and a copy of the site's administrative record (DOE Order 1430.4) and information repository.

5.5 Media Relations

Media relations activities are designed to provide all media (national, state, and local) with timely, accurate information about Weldon Spring site activities, events, and status changes (DOE Order 1200.1). These activities include, but are not limited to, press briefings, project press kits, public service announcements, media advisories, visual materials for TV, and news releases.

Special briefings for the editorial boards of the St. Louis and St. Charles area newspapers are conducted as required.

5.6 Community Contact

The purpose of the community contact effort is to ensure that key community leaders, including Federal, State and local government officials, Francis Howell High School, and the general public, are informed in a timely fashion of activities, events, and status changes (DOE Order 1200.1). Current lists are kept of all concerned parties. Included on this list are:

- Legislators (Federal, State, local)
- Executive branch officials (Federal, State, local)
- Opinion leaders
- St. Charles Countians Against Hazardous Waste
- Media (print, electronic)
- Interested citizens
- Francis Howell School District high school administrators

- Leaders of the business and professional community
- Residents near the site

5.7 Public Meetings

Public hearings and meetings are held as required, when issuing a document for public review. In addition to the public meetings and hearings required by law, frequent informational meetings are held as activities warrant or as requested by the community. WSSRAP officials keep a close eye on community concerns in order to respond to inquiries in a timely fashion.

5.8 Special Events

Special events (i.e., expositions, open houses, and workshops) are scheduled in order to supplement information in soon-to-be released documents and upcoming public meetings, or to keep the public informed about and involved in the project.

5.9 Assistance for Public Officials

Local, State, and Federal officials whose areas of jurisdiction are impacted by the WSSRAP need sufficient and timely information for the benefit of their constituents. In addition to assistance through regular channels for disseminating information, these officials receive assistance in obtaining specific information for their constituents, preparation of testimony, and project status updates from approved project personnel.

5.10 Response to Public Inquiries

The WSSRAP Office uses all available materials and personnel to respond quickly and completely to any and all inquiries from the public.

5.11 Site Tours

Site tours are intended to acquaint key community leaders, including governmental and opinion leaders, with the Weldon Spring site during remedial action construction and after remedial action is completed.

5.12 Partners in Education Program

Utilizing the great depth of professional and technical resources represented by DOE and PMC personnel at the site, the WSSRAP Office consults with St. Charles County school administrators to determine what contributions the project can offer their education system. Examples of such support include seminars on radiation education for parents and teachers, student field trips, classroom instruction, science fair projects, and hands-on experience with health physics equipment.

A modest environmental internship program is conducted for local area graduate students. This provides not only any additional community relations function, but also solicits the involvement of science and engineering affirmative action and equal employment opportunity.

Area colleges and state universities are made aware of technical and scientific activities taking place at the site. Appropriate education and training opportunities are explored, and, to the greatest extent possible, made available to students and faculty at these institutions.

5.13 Internal Staff Support

The WSSRAP Community Relations staff maintains close contact with all project personnel to keep them informed of community relations activities and to assist them in providing technical, engineering, scientific, and environmental information to the public.

The Community Relations staff also coordinates training workshops for project personnel to improve communications skills.

All hands meetings and brown bag lunchtime sessions are conducted periodically to keep employees informed of the site's progress and to allow the DOE and PMC management to hear any concerns.

A site newsletter, the *NEWSSRAP*, is published twice a month to communicate site events, progress, issues, and other information to the PMC and Subcontractor personnel.

6 REFERENCES

DOE Orders

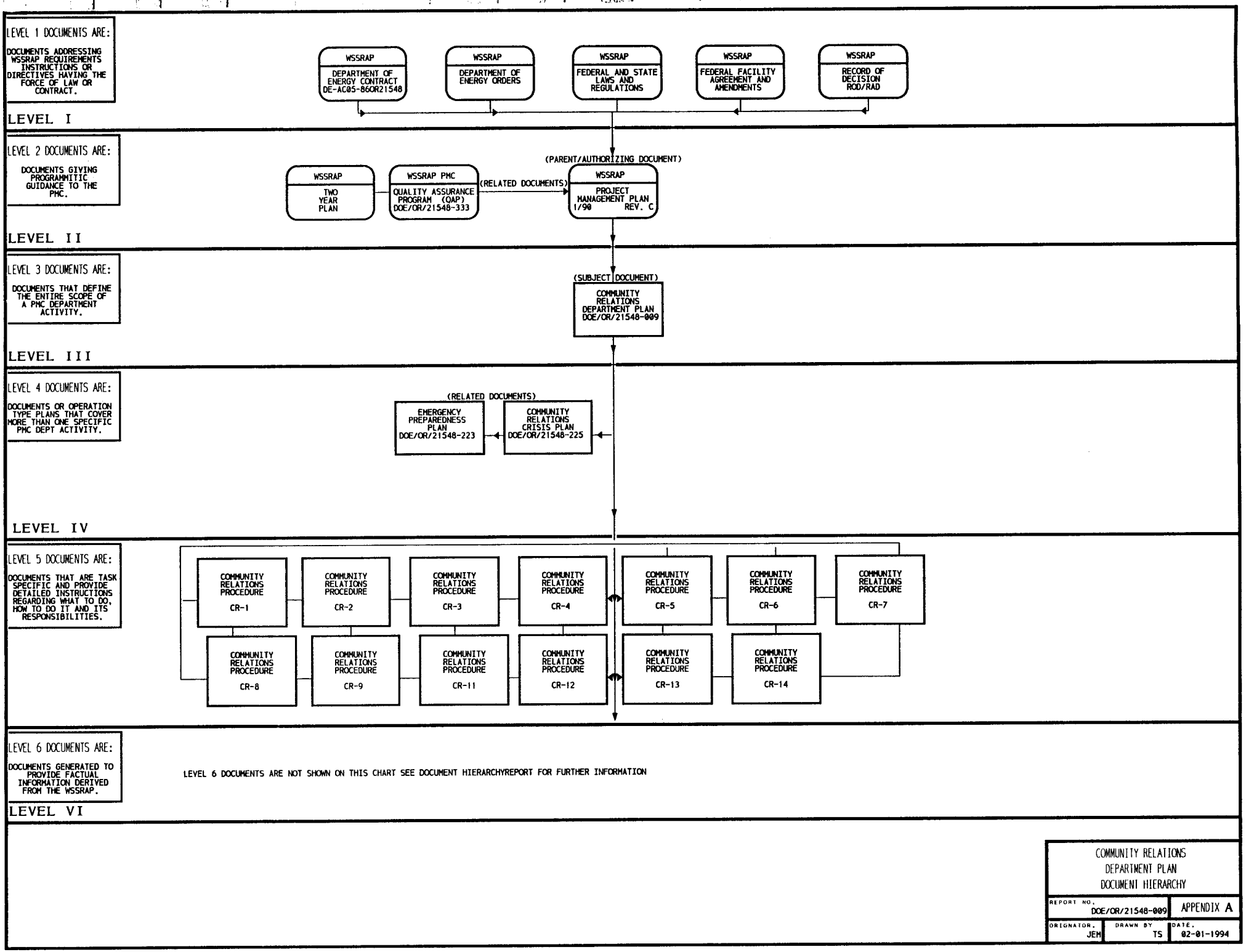
DOE Order 1200.1 Policy and Procedures for Departmental News Media Activities

DOE Order 1350.1 Audiovisual and Exhibits Management

DOE Order 1430.1B Managing of Scientific and Technical Information

DOE Order 1430.4 Library Services

APPENDIX A
Document Hierarchy


LEVEL 1 DOCUMENTS ARE:
DOCUMENTS ADDRESSING WSSRAP REQUIREMENTS INSTRUCTIONS OR DIRECTIVES HAVING THE FORCE OF LAW OR CONTRACT.
LEVEL I
WSSRAP
DEPARTMENT OF ENERGY CONTRACT DE-AC05-86OR21548
WSSRAP
DEPARTMENT OF ENERGY ORDERS
WSSRAP
FEDERAL AND STATE LAWS AND REGULATIONS
WSSRAP
FEDERAL FACILITY AGREEMENT AND AMENDMENTS
WSSRAP
RECORD OF DECISION ROD/RAD
LEVEL 2 DOCUMENTS ARE:
DOCUMENTS GIVING PROGRAMMITIC GUIDANCE TO THE PMC.
LEVEL II
WSSRAP
TWO YEAR PLAN
WSSRAP PMC
QUALITY ASSURANCE PROGRAM (QAP) DOE/OR/21548-333
(RELATED DOCUMENTS)
(PARENT/AUTHORIZING DOCUMENT)
WSSRAP
PROJECT MANAGEMENT PLAN 1/90 REV. C
LEVEL 3 DOCUMENTS ARE:
DOCUMENTS THAT DEFINE THE ENTIRE SCOPE OF A PMC DEPARTMENT ACTIVITY.
LEVEL III
(SUBJECT DOCUMENT)
COMMUNITY RELATIONS DEPARTMENT PLAN DOE/OR/21548-009
LEVEL 4 DOCUMENTS ARE:
DOCUMENTS OR OPERATION TYPE PLANS THAT COVER MORE THAN ONE SPECIFIC PMC DEPT ACTIVITY.
LEVEL IV
(RELATED DOCUMENTS)
EMERGENCY PREPAREDNESS PLAN DOE/OR/21548-223
COMMUNITY RELATIONS CRISIS PLAN DOE/OR/21548-225
LEVEL 5 DOCUMENTS ARE:
DOCUMENTS THAT ARE TASK SPECIFIC AND PROVIDE DETAILED INSTRUCTIONS REGARDING WHAT TO DO, HOW TO DO IT AND ITS RESPONSIBILITIES.
COMMUNITY RELATIONS PROCEDURE CR-1
COMMUNITY RELATIONS PROCEDURE CR-2
COMMUNITY RELATIONS PROCEDURE CR-3
COMMUNITY RELATIONS PROCEDURE CR-4
COMMUNITY RELATIONS PROCEDURE CR-5
COMMUNITY RELATIONS PROCEDURE CR-6
COMMUNITY RELATIONS PROCEDURE CR-7
COMMUNITY RELATIONS PROCEDURE CR-8
COMMUNITY RELATIONS PROCEDURE CR-9
COMMUNITY RELATIONS PROCEDURE CR-11
COMMUNITY RELATIONS PROCEDURE CR-12
COMMUNITY RELATIONS PROCEDURE CR-13
COMMUNITY RELATIONS PROCEDURE CR-14
LEVEL 6 DOCUMENTS ARE:
DOCUMENTS GENERATED TO PROVIDE FACTUAL INFORMATION DERIVED FROM THE WSSRAP.
LEVEL VI
LEVEL 6 DOCUMENTS ARE NOT SHOWN ON THIS CHART SEE DOCUMENT HIERARCHYREPORT FOR FURTHER INFORMATION
COMMUNITY RELATIONS DEPARTMENT PLAN DOCUMENT HIERARCHY
REPORT NO. DOE/OR/21548-009
APPENDIX A
ORIGINATOR. JEM
DRAWN BY TS
DATE. 02-01-1994

Department of Energy
Oak Ridge Operations
Weldon Spring Site
Remedial Action Project Office
7295 Highway 94 South
St. Charles, Missouri 63304

March 14, 1994

Mr. Dan Wall
Remedial Project Manager
U.S. Environmental Protection Agency
Region VII
726 Minnesota Avenue
Kansas City, Kansas 66101

Dear Mr. Wall:

COMMUNITY RELATIONS PLAN (CRP), REV. 7, FEBRUARY 1994

We are providing the referenced document for your information. We have made three minor revisions/additions from the previously submitted CRP, and they are:

1)	p. ii:	"Abstract" section added
2)	p. 24:	"Availability of Funds" section added
3)	p. 29:	Section 5.13, last paragraph - information on "NEWSSRAP" added

If you have any further questions, please contact Karen Reed at (314) 926-7008 or Jim McKee, PMC, at (314) 926-7026.

Sincerely,

Jerry S. Van Fossen
Deputy Project Manager
Weldon Spring Site
Remedial Action Project

Enclosure:
As stated

cc w/o enclosure:
L. Erickson, MDNR
M. Kopper/G. Kountzman, MDNR
J. McKee, PMC
W. Anderson, PMC

Department of Energy
Oak Ridge Operations
Weldon Spring Site
Remedial Action Project Office
7295 Highway 94 South
St. Charles, Missouri 63304

March 14, 1994

Mr. Larry Erickson
Missouri Division of Natural Resources
P.O. Box 176
Jefferson City, Missouri 65102

Dear Mr. Erickson:

COMMUNITY RELATIONS PLAN (CRP), REV. 7, FEBRUARY 1994

We are providing the referenced document for your information. We have made three minor revisions/additions from the previously submitted CRP, and they are:

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Sincerely,

Jerry S. Van Fossen
Deputy Project Manager
Weldon Spring Site
Remedial Action Project

Enclosure:
As stated

cc w/ enclosure:
M. Kopper/G. Kountzman, MDNR

cc w/o enclosure:
J. McKee, PMC
W. Anderson, PMC

QY-800-803-1.01

NOTICE OF PUBLIC AVAILABILITY

THE UNITED STATES DEPARTMENT OF ENERGY ANNOUNCES THE AVAILABILITY OF THE ADMINISTRATIVE RECORD FOR QUARRY RESIDUALS AT THE WELDON SPRING QUARRY

The U.S. DOE announces the availability for public review of files comprising the Administrative Record for the selection of the remedial action at the Weldon Spring Quarry, Weldon Spring, Missouri. DOE seeks to inform the public of the availability of the Administrative Record and encourages the public to comment on documents as they are placed in the Administrative Record.

The Administrative Record includes documents which form the basis for the selection of a remedial action at this site. Documents now in the record files include RI Sampling Plan, Environmental Monitoring Plan, RI/FS Work Plan and the Community Relations Plan. Other documents will be added to the record files as site work progresses. These additional documents may include, but are not limited to, the RI/FS Report, other technical reports and additional validated sampling data. Comments and new data submitted by interested persons, and DOE responses to significant comments will also be included in the Administrative Record.

The Administrative Record is available for review during normal business hours 8:00 a.m. to 4:30 p.m. at the Weldon Spring Site public reading room:

Weldon Spring Site Remedial Action Project
7295 Highway 94 South
St. Charles, Missouri
314-441-8086

Written comments on the Administrative Record should be sent to:

Community Relations/
Administrative Records Coordinator
Weldon Spring Site Remedial Action Project
7295 Highway 94 South
St. Charles, Missouri 63304