WSSRAP

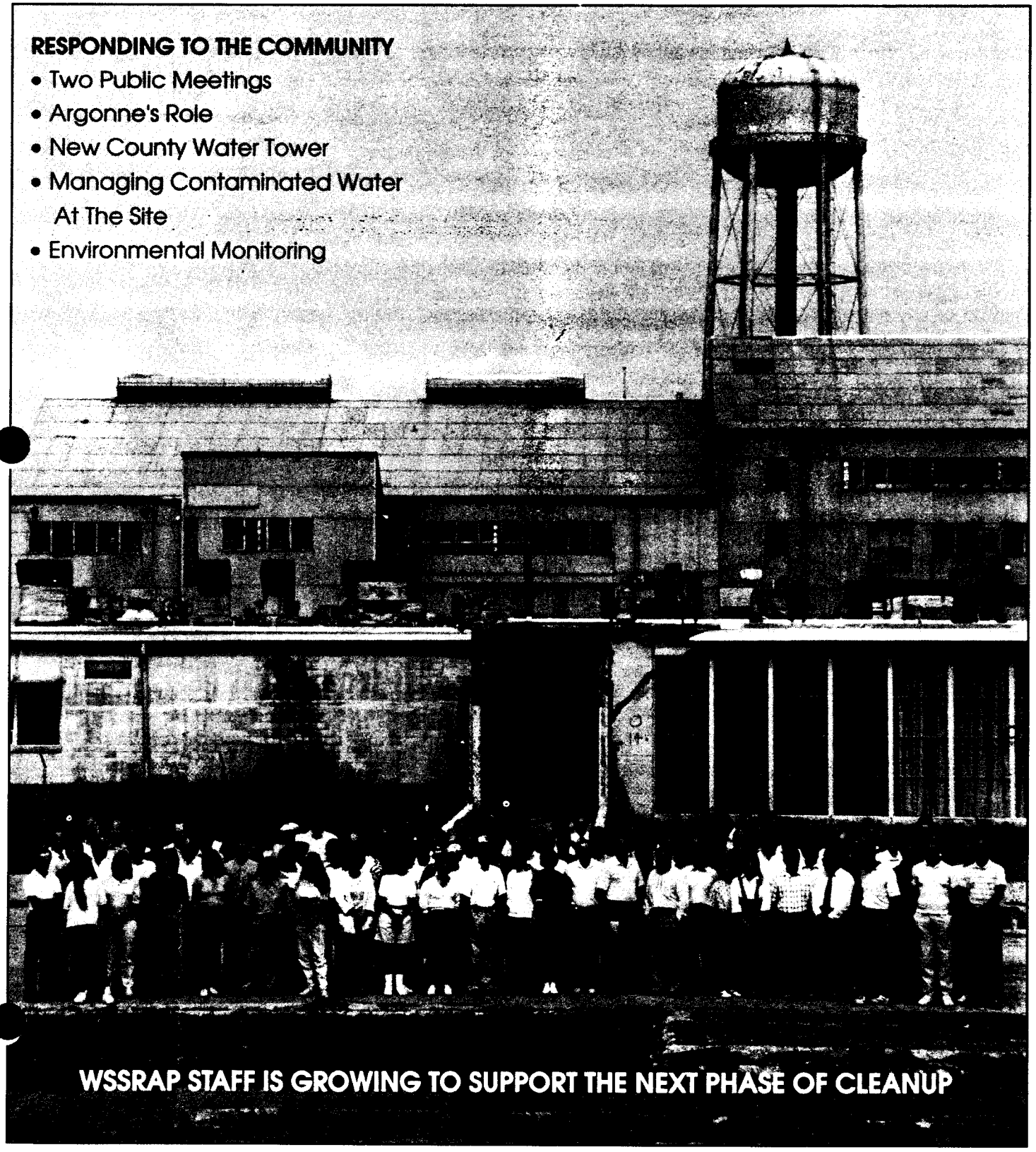
WELDON SPRING SITE REMEDIAL ACTION PROJECT

UPDATE

November 1990

RESPONDING TO THE COMMUNITY

- Two Public Meetings
- Argonne's Role
- New County Water Tower
- Managing Contaminated Water At The Site
- Environmental Monitoring



WSSRAP STAFF IS GROWING TO SUPPORT THE NEXT PHASE OF CLEANUP

ARGONNE NATIONAL LABORATORY SERVES WSSRAP

The Weldon Spring Project is a total team effort with a number of different groups involved in preparing and reviewing project plans and activities. One of these is a group at Argonne National Laboratory (ANL), a Department of Energy laboratory operated by the University of Chicago.

Multidisciplinary work on both theoretical and applied research is conducted at ANL, located southeast of Chicago, IL. Margaret MacDonell, Ph.D., Project Manager of the group assisting Weldon Spring, says ANL serves as the independent environmental compliance organization for the project. The group includes experts in health physics, toxicology, chemistry, industrial hygiene, nuclear and environmental engineering, ecology, hydrology, geology, meteorology, sociology and archeology.

"Our WSSRAP team evaluates potential health and environmental impacts associated with the site and prepares environmental documents for the project," Dr. MacDonell says. "As part of our job, the ANL team provides an independent evaluation of engineer studies and analytical data for the project."

Dr. MacDonell adds that ANL also makes sure that WSSRAP activities are carried out in compliance with environmental regulations.

Currently, ANL is busy working on two environmental documents for the project. These are the baseline assessment of potential health and environmental risks for the chemical plant area and the feasibility study for that area's cleanup. "The baseline assessme discusses what could happen if no cleanup action were taken," she says. "The feasibility study evaluates engineering technologies and cleanup alternatives, as well as potential risks associated with those alternatives.

Dr. MacDonell says that ANL is collaborating with Harvard University on risk analyses that are underway in order to bring to the project additional expertise in the field on multimedia health risk assessment.

"We expect both environmental documents will be available next summer," she says. "Public comments on information in the documents prepared by ANL are important to the decision-making process for the project."

Dr. MacDonell has been with ANL for four years and has been associated with WSSRAP since 1987. She obtained her doctorate in Environmental Health Engineering from Northwestern University and her M.S. and baccalaureate degrees from Notre Dame.

Argonne's team coordinates with WSSRAP managers in preparing environmental compliance documents. Working on the Remedial Investigation/Feasibility Study (RI/FS) for the chemical plant site are, left to right, Lou Gonzales, RI/FS Site Manager; Lynne Haroun, Argonne Team Project Assistant Manager; Margaret MacDonell, Argonne Team Project Manager and Ken Meyer, Environmental Protection Manager.

CHEMICAL INCIDENT EMPHASIZES TOTAL SAFETY AWARENESS

A chemical incident September 20 demonstrated that WSSRAP's emphasis on safety is essential not just for radioactive contaminants

but for chemical materials as well.

Three men who were consolidating base chemicals in Building 406 received acid burns as a result of an unexpected reaction. The building is used as a staging area for consolidating miscellaneous materials left on the site from previous operations.

Industrial Hygienist Dan Hoffman reports that all three individuals evacuated the building and the situation was under control shortly after it happened.

"Fortunately, the accident caused only minor injuries," Mr. Hoffman says. "Our emergency response procedures worked well. It reinforced that emphasis on safety is necessary not only for radioactive materials but also for all areas of the site."

Consolidation of various chemicals, paints and solvents found on the site is 95 percent complete. The task involves collecting, identifying, consolidating and repackaging the materials for storage prior to final disposition. Over 1,000 containers have been consolidated.

NEW WATER TOWER PLANNED

Plans are underway to relocate and replace the St. Charles Water Company water tower situated on the Chemical Plant site.

The new location under consideration is on the U.S. Army property adjacent to the plant site, according to WSSRAP Project Engineer N.E. Hopson, Ph.D.

Stating that remedial action plans often dovetail into other major projects, Dr. Hopson says that when the bulk waste is removed from the Weldon Spring Quarry to the temporary storage area at the plant site, pipes serving the water tower could be damaged.

"Actually, the proposed location for the temporary storage area is situated over the water tower supply pipes that currently run through the site," Dr. Hopson says. "In order to safeguard the quality of the water supply, a new water tower will be built and the pipes running through the site will be capped," he explains.

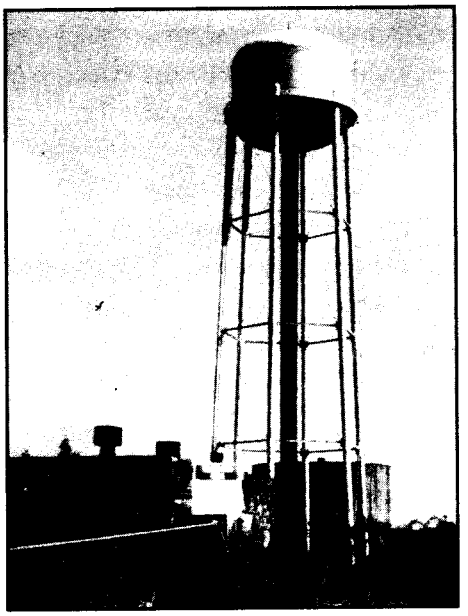
"The Water Department has negotiated with the Department of Army to relocate to the Army property," Dr. Hopson says. The actual location of the new water tower will be 1/2 mile southwest from its present location. Dr. Hopson adds "the Water Department has asked WVP Corporation, a St. Louis based architectural firm, to design the water tower."

ORIGINAL TOWER FOR FIRE CONTROL

Glen Newtown, DOE Project Engineer who has been working with the County Water Department engineers, says the original tower was built in 1955 for the Chemical Plant.

The Department of Energy expects to pay for the new tower which will have a standard size capability of 400,000 gallons compared to the old 350,000-gallon tower. The new tower will be at the same elevation as the old one, Mr. Newtown says. "When we do this we are providing equal service to the community."

The Department of Energy expects to pay for the new tower.



This 350,000-gallon water tower will be replaced with a new 400,000-gallon tower to be built on the U.S. Army Reserve property next to WSSRAP. The old, 190-foot water tower will be removed to make way for the Temporary Storage Area for the Quarry Bulk Waste.

TWO MEETINGS HELD TO OBTAIN PUBLIC INPUT FOR CLEANUP PLANS

The United States Department of Energy (DOE) has conducted two Public Meetings within a five-month period to broaden the range of public involvement in the Weldon Spring cleanup.

Stephen H. McCracken, DOE Project Manager at the Weldon Spring Site Remedial Action Project (WSSRAP), describes the meetings as part of DOE's responsibility to make its environmental programs responsive to public concerns. "Meeting and talking with the public is the only way to achieve understanding and, hopefully, acceptance that we are making the correct decisions and doing the work safely," Mr. McCracken says.

The March 29 meeting on the removal of bulk waste from the Weldon Spring Quarry was co-sponsored with the U.S. Environmental Protection Agency. The August 16 meeting on the management of contaminated surface waters impounded at the former chemical plant was co-sponsored with the Missouri Department of Natural Resources (MDNR).

The ability to treat a large quantity of water...is necessary to support the Quarry bulk waste removal.

Under the March 29 proposal, the bulk waste in the Quarry will be transported to a temporary storage area at the plant site. Engineering and construction of the temporary storage area, and a haul road using the former railroad right-of-way, will begin in 1992.

Plans discussed at the August Public Meeting call for construction of a second water treatment facility. This will be located at the Chemical Plant to treat impounded water and water collected during future cleanup operations at the temporary storage area. This operation is contingent upon modification of the State of Missouri water discharge permit, the draft of which was also discussed at the August meeting.

Stating that each step depends on the other, Mr. McCracken explains that the ability to treat the large quantity of water impounded on the plant grounds is necessary to support the Quarry bulk waste removal.

DISCHARGE PERMIT DRAFT

Robert Hentges, Chief of the Permit Section of MDNR's Water Pollution Control Program, discussed the state's draft treated water discharge permit. He explained that this was the seventh modification of an existing Weldon Spring Site permit first issued in July, 1988, for five stormwater release points and modified for a sixth discharge later in the year.

"The proposed modification," he said, "is for the addition of number seven outfall to allow the release of treated waste water. The effluent limitations for this discharge are based on drinking water standards."

ELECTED OFFICIALS COMMENT

State Representative Craig Kilby was complimentary about the "exemplary job" in cleaning up the site faster than anyone had thought possible. "I think it's a good plan," he said.

State Representative Ted House also spoke at the meeting. He said that people of this county put a great deal of trust in the representatives of the state and federal government. "You have responded to that very well and openly and fairly," he said. "People are concerned about their health and safety." Mr. House expressed gratitude for the manner "in which the project is being conducted."

USE OF WATERSHED VS PIPELINE

Treated water released from the site effluent ponds will not be piped to the river, officials said. Because the water will be treated to near drinking water standards, discharge to a nearby drainage

will meet safety requirements. Engineers did consider piping the treated water to the river and discussed that alternative with the Department of Conservation, the MDNR and United States Environmental Protection Agency (EPA). It was concluded that the environmental impact of constructing a pipeline through a forested area outweighed any benefits.

WELDON SPRING QUARRY WASTE REMOVAL DISCUSSED AT PUBLIC MEETING MARCH 29

Plans to clean up the Weldon Spring Quarry by removing bulk waste dumped there years ago were discussed by government and school officials and interested citizens at a Public Meeting held March 29 in Wentzville.

Sponsored by the DOE and EPA, the meeting was held to obtain comments from members of the public and organized groups.

Introductory remarks were made by Robert Morby, Chief of EPA's Region VII Superfund Branch, and by Mr. McCracken, who chaired the question and answer session.

Rick Ferguson, WSSRAP Quarry Manager, presented slides that outlined the plans for excavating the waste and transporting it over a new haul road to the chemical plant site where a temporary storage area will be built.

Mr. Ferguson explained that contaminated water was leaking from the Quarry in the direction of the St. Charles County Well Field. "Fortunately," he said, "it has not gotten into the well field." He said that monitoring wells confirm that the well field has not been contaminated, but there is no reason to believe it could not become contaminated at some point in the foreseeable future if a timely response is not taken.

Quarry excavation will begin in the spring of 1992.

Mr. Ferguson said excavation work will begin in the spring of 1992 and was scheduled to be completed in the winter of 1993.

The public commented on the Quarry information presented at the March 29 Public Meeting. Sue Schneider, a local St. Charles County citizen, was the volunteer moderator.

REPRESENTATIVE ORTWERTH COMMENTS

State Representative Joe Ortwerth said he was pleased with the proposal.

"I urge DOE to proceed with a sense of urgency in reclaiming the debris deposited in the Quarry before additional radioactive and chemical elements escape into the groundwater beneath the Quarry,"he said.

Mr. Ortwerth insisted on continuation of frequent monitoring of the groundwater and commended DOE for its decision to transport the waste on a specially constructed haul road. He said he favored construction of a separated grade crossing for Highway 94.

Editor's note:
DOE and the State Highway Department are currently working on plans for the proposed overpass.

SCHOOL DISTRICT COMMENTS

Dr. Wanda McDaniel, Francis Howell District Superintendent, said there are continuing concerns about the safety of students and employees of the district. She reviewed her earlier request that resulted in DOE's hiring a consulting firm to act on behalf of the District in environmental and health matters. The arrangement with the consultant, Bill Thomas of Mathis Associates, is working well, she said.

"EPA has concluded that the proposed alternative... is appropriate..."

ROLE OF EPA

Robert Morby told the meeting that when Congress passed the Superfund Law it gave EPA oversight authority to look at hazardous waste sites, including federal facilities.

"We have exercised that responsibility here at the Weldon Spring site," Mr. Morby said. "We've worked closely with the Department of Energy officials and our contract personnel as well as the State of Missouri."

Mr. Morby added that the EPA has concluded that the proposed alternative under discussion "is appropriate and we support it."

PROCUREMENT HELD OPEN HOUSE FOR CONTRACTORS

PARTNERS IN EDUCATION
Roger Nelson, Jacobs Engineering Group, Inc. Project Manager, discussed worker-safety and health procedures used at WSSRAP with the Francis Howell High School Student Council and administrators during their recent visit.

An open house conducted by the Procurement Department at WSSRAP attracted over 70 people from 30 companies.

One attendee represented the Minority Purchasing Council which has contracts with over 100 or more small businesses.

St. Louis University sent a representative from its Procurement Matching Network which assists small businesses to make profitable contacts. According to Bill Putnam, WSSRAP Procurement Manager, the purpose of the open house was to expand a list of contractors for the small and small-disadvantaged businesses which Procurement maintains.

WSSRAP GOES FISHING

The Missouri Department of Conservation Fisheries Biologist and the Environmental/Health and Safety Personnel at the Weldon Spring Site periodically check the uranium levels of fish at Busch Wildlife lakes.

Ken Meyer, Environmental Protection Manager at WSSRAP, says that although swimming or wading are not authorized activities, there is some public concern about the site contamination of fish in Busch Lakes 34, 35 and 36 that receive surface water runoff from the Weldon Spring Site.

Neal Allday and Dave Schlotzhauer of WSSRAP and Mark Green of the Missouri Department of Conservation electrically stun fish on Lake 35 at Busch Wildlife Reserve for a fish population study. Although several hundred pounds are caught for a survey, only one pound of fish is used for bio-studies. Most are returned to the lake.

"Samples collected in 1987 did not detect uranium in the fish at levels of .01 pico curies per gram," Mr. Meyer says. "In 1989, using better analytical methods, uranium was detected at levels above .001 pico curies per gram."

Mr. Meyer points out with the more sensitive measuring, uranium was detected in lakes not impacted by the site as well as in lakes that receive storm water runoff from WSSRAP.

"The bottom line," he says, "is that the uranium levels detected present essentially no risk to the public."

Monitoring of the fish provides the public, who visit Busch Wildlife each year, assurance that there is no danger because of contaminants from the Weldon Spring Site.

The Department of Energy and the Missouri Department of Conservation will continue to work together in monitoring the conditions of the lakes that are affected by the Weldon Spring Site.

HOW THE COVER PHOTOGRAPH WAS MADE

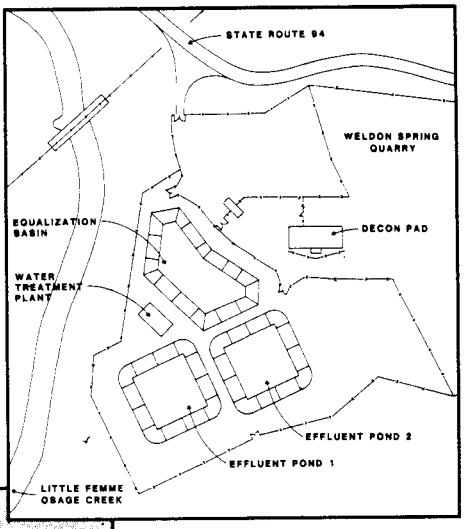
Joe Beil took the staff photo for the WSSRAP Update cover while standing on a step ladder safely secured to the bed of a truck. He used a 35 mm camera with a 72 mm lens.

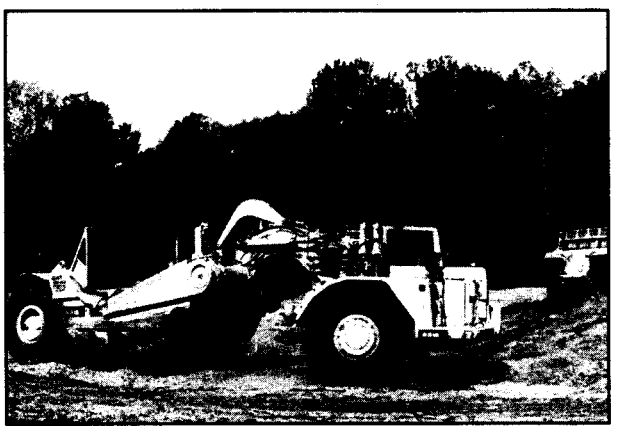
WASTE WATER TREATMENT SYSTEMS

Currently all water at the Quarry and at the Chemical Plant Site is monitored. Construction of two water treatment systems will allow for the control and treatment of contaminated water at both locations.

Quality of the water leaving the treatment plants will be monitored for compliance with discharge limits established in a National Pollutant Discharge Elimination System (NPDES) Permit issued by the Missouri Department of Natural Resources.

Both treatment plants will have similar layouts. Water to be treated will be pumped to an equalization basin to obtain a uniform mix. It will then go to the water treatment plant. Two lined effluent ponds will collect the treated water until analysis assures that the water is safe for discharge to the Missouri River. This "batch" system will insure that only properly treated water will be released. While the second pond is filling with treated water, the first pond is tested, and only if the water passes the analytical requirements, will it be discharged offsite. If it does not meet NPDES standards, it will be treated again.





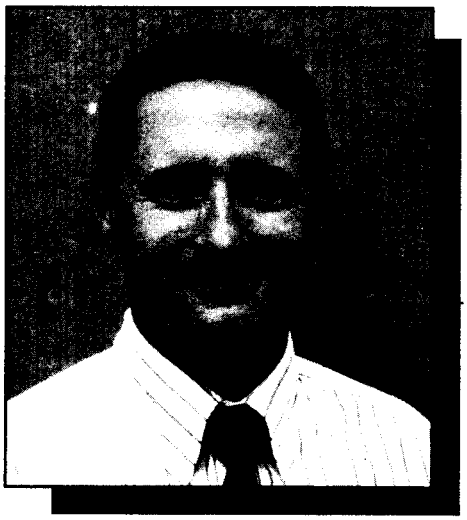
Work is underway at the Weldon Spring Quarry for the construction of one equalization basin and two effluent ponds required for operation of the Water Treatment Plant to be built there.
Large Caterpiller Scrapers like the one pictured below have excavated approximately 43,000 cubic yards of land in preparation for the construction of the Water Treatment Plant.
The Plant will be located on approximately 10 acres just south of the Quarry. David Kolb Grading Inc. of St. Charles is the subcontractor for the Quarry Staging and Water Treatment Area.

STEVE McCRACKEN APPOINTED DOE SITE PROJECT MANAGER

The U.S. Department of Energy (DOE) has named Stephen H. McCracken as Project Manager for the Weldon Spring Site Remedial Action Project.

Mr. McCracken succeeds Rodney Nelson who was transferred to Oak Ridge, Tennessee, to be Assistant Manager for Environment, Safety & Quality.

Mr. McCracken previously had been DOE Deputy Project Manager here, a position he held since 1987.



JERRY VAN FOSSEN

Jerry S. Van Fossen, newly arrived at WSSRAP, has assumed his new duties as U.S. DOE Deputy Project Manager, succeeding Steve McCracken.

Mr. Van Fossen has more than 23 years of management and technical experience in design, construction, testing and quality assurance in nuclear materials production, uranium enrichment and aerospace/defense industries.

Mr. Van Fossen is a Lieutenant Colonel in the U.S. Air Force Reserve and is an Admissions Liaison Officer for the United States Air Force Academy. When on active duty he served as Aircraft Maintenance Officer at the Ubon Royal Thai Air Force Base, Thailand.

NEW ES&H MANAGER

Charles C. Reith, Ph.D., has been named manager of the Environmental Safety and Health Department at the Weldon Spring Remedial Action Project.

CHARLES C. REITH, Ph.D.

Dr. Reith has 12 years of experience in environmental management, with an emphasis on regulatory compliance and disposal of hazardous chemical and nuclear waste. His previous position was Manager of Environmental Services for the Jacobs Engineering Group, Albuquerque. Dr. Reith managed regulatory compliance planning and preparation of technical input for the Environmental Impact Statement for DOE's new Production Reactor Program and directed preparation of an Environmental Assessment for an explosives components testing facility at Sandia National Labs.

Dr. Reith served as Adjunct Professor of Engineering at the University of Mexico where he taught graduate classes in hazardous waste materials management.

As Manager of the ES & H Department, Dr. Reith will oversee the environmental monitoring and health, safety and protection practices at the Weldon Spring Site.

NEW P.E.s LICENSED

Four site engineers recently received Professional Engineers Licenses. They are Kenneth A. Meyer, Jr., Richard D. Ferguson, William R. Goldkamp, and Ken Warbritton.

WSSRAP Update

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