James P. Bowers, PE
R. William Rudolph, Jr., PE

LETTER OF TRANSMITTAL

TO: Mr. M. Hossain Kazemi
Regional Water Quality Control Board
San Francisco Bay Region
1111 Jackson Street, Room 6040
Oakland, California 94607

DATE: September 15, 1989
PROJECT Plaza Car Wash
SCI JOB NUMBER: 549.001

Surface Water Contamination Mitigation

WE ARE SENDING YOU:

1 copies

- ☐ of our final report
- ☐ a draft of our report
- ☐ a Service Agreement
- ☐ a proposed scope of services
- ☐ specifications
- ☐ grading/foundation plans
- ☐ soil samples/groundwater samples
- ☐ an executed contract
- ☒ the letter you requested

- ☒ if you have any questions, please call
- ☒ for your review and comment
- ☐ please return an executed copy
- ☐ for geotechnical services
- ☐ with our comments
- ☐ with Chain of Custody documents
- ☐ for your use
- ☐ _____
- ☐ _____

REMARKS: Mr. Murray Stevens, the owner of Plaza Car Wash, is out-of-town and unavailable to send the attached letter to you, appended to his own transmittal. The letter has been reviewed by his attorney, Mr. Craig Johns of Crosby, Heafey, Roach & May. We are sending the letter to you, with Mr. John's approval, in order that you can review and approve the proposed mitigation method prior to the start of work.

COPIES TO:
Mr. Craig Johns, Crosby, Heafy, Roach & May
Mr. Murray Stevens, Kamur Industries

BY: _____
William K. Wikander

O.K.
Verbally to Lawyer
Tom Hoskan 763 2000
9/18/89

■ Subsurface Consultants, Inc.

171 12th Street • Suite 201 • Oakland, California 94607 • Telephone 415-268-0461

James P. Bowers, PE
R. William Rudolph, Jr., PE

September 15, 1989
SCI 549.001

Mr. Murray T. Stevens
Kamur Industries
2351 Shoreline Drive
Alameda, California 94501

Consultation
Surface Water Contamination Mitigation
Plaza Car Wash
400 San Pablo Avenue
Albany, California

Dear Mr. Stevens:

This letter presents results of our consultation regarding mitigation of contaminated water entering El Cerrito Creek at the subject site. Our previous consultations regarding the site were recorded in letters dated August 22 and September 1, 1989.

Based upon groundwater level measurements from monitoring wells that have been installed at the site, the direction of groundwater flow is about south 65 to 80 degrees west with about a 1 percent gradient. The approximate storm drain location is shown on Plate 1; it is about 2 feet below the groundwater level encountered in the monitoring wells. Storm drains are often constructed with relatively permeable backfill and with unsealed joints. It is likely that the storm drain is acting as a subsurface drain, lowering the groundwater level in the area. We judge that the contaminated groundwater is also flowing toward the stormdrain, entering through joints and exiting into El Cerrito Creek.

Based upon the results of a recently completed soil gas study, contaminated soil/water appears to be located along the north about 60 feet of the storm drain. We understand that the Albany Fire Department viewed the storm drain interior using a video camera. Product was only observed to enter the storm drain north of the manhole, which is located about 90 feet from the creek. Based upon the soil gas and video studies, we judge that contaminated water does not appear to be entering the storm drain south of the manhole.

In order to mitigate the discharge of free and dissolved product into El Cerrito Creek, we recommend that the storm drain joints be sealed so that subsurface water cannot enter. We judge that the Cues Joint Sealing System described in the attached brochure is an acceptable method for sealing the joints.

We understand that the joints will be sealed starting Tuesday, September 19, 1989, by Pacific Pipeline Survey. The pipe will first be swabbed, then cleaned using high-pressure water spray. If contaminated soil is removed from the pipe, it will be stockpiled for later proper disposal. The pipe rinse water will be allowed to flow into the creek after free product is removed. After cleaning, each pipeline joint north of the manhole will be injected with grout and tested for a tight seal. After construction, samples of water from the storm drain outlet should be analytically tested weekly for total volatile hydrocarbons (TVH). If no TVH is detected for at least 4 weeks, the sampling/testing intervals should be reduced to quarterly. If significant TVH is still detected, additional mitigations may be necessary.

Although the discharge of product/contaminated water into El Cerrito Creek should be substantially mitigated using the above recommendations, contaminated soil and groundwater will still remain at the site. Further investigation will be necessary in order to develop plans to mitigate these problems.

We recommend that this letter be submitted to the RWQCB, Alameda County Health Care Services Agency and Bay Area Air Quality Management District.

If you have questions, please call.

Yours very truly,

Subsurface Consultants, Inc.

R. William Rudolph
Geotechnical Engineer 741 (expires 12/31/92)

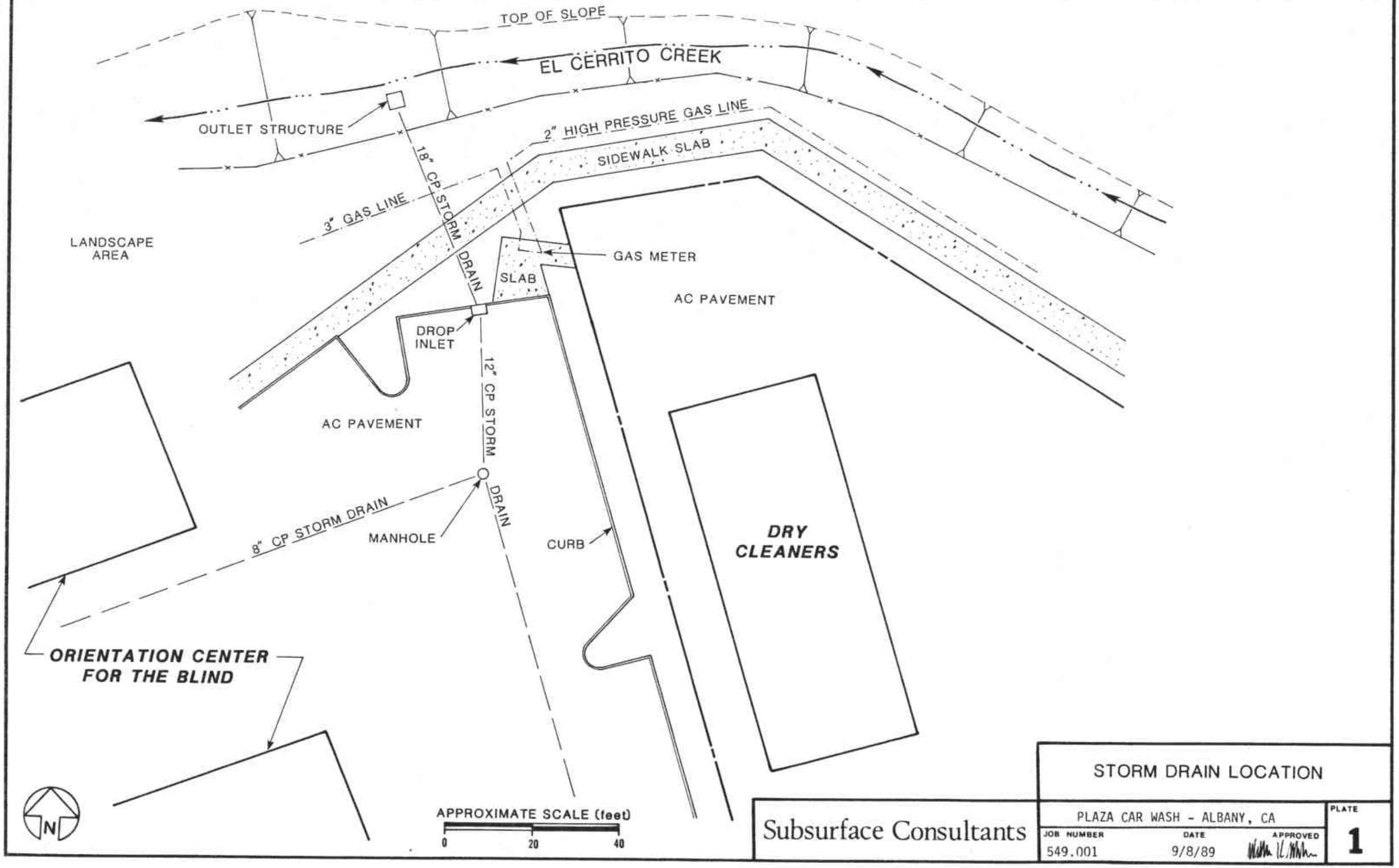
William K. Wikander
Geotechnical Engineer 892 (expires 12/31/92)

WKW:RWR:mbl

4 copies submitted

Attachments: Plate 1 - Storm Drain Location
Cues Brochure

cc: Mr. Craig Johns
Crosby, Heafey, Roach & May
1990 Harrison Street
Oakland, California 94612



STORM DRAIN LOCATION

Subsurface Consultants

PLAZA CAR WASH - ALBANY, CA

JOB NUMBER	DATE	APPROVED	PLATE
549.001	9/8/89		1

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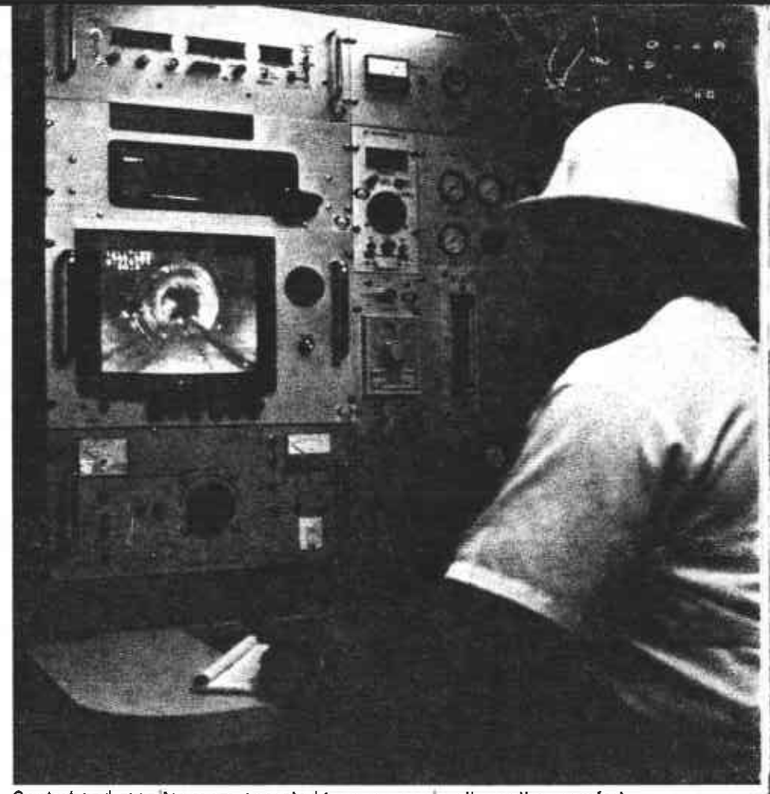
CUES

The Cues Television Inspection and Joint Sealing System, operating over long periods and all types of field conditions, is unmatched in performance by any other comparable equipment now available. The rugged CUES cameras go into the sewer pipe for inspection. The ultra wide 64° angle lens allows maximum viewing of the pipe walls to spot cracks, leaks and other defects. The camera instantly relays the picture to the mobile unit's large screen. The high resolution monitor enables the crewman to pinpoint the exact location of any visible defect. CUES' high quality color or black and white television cameras are equipped with the latest electronic developments, including optional features such as remote focus, auto iris override and color balance controls. The camera will maintain quality performance despite the severe conditions of the sewer environment, and is backed by the longest warranty period for equipment in this industry.

The sealing packer is positioned at the joint with the television camera and the joint is pressure tested, using the CUES Posatryn test assembly. The Posatryn testing system utilizes either air or water to determine the integrity of the joint, so that leaking joints can be found even if they are not visible to the camera. The groundwater table may temporarily be below the pipe and some defect that would allow infiltration of groundwater may not be visible. If it is determined that the joint is leaking, then sewer grout is injected through the leaking joint to complete the sealing operation. The sealing gel is pumped through the same packer that is used to test the joint, so the entire testing and sealing procedure is done in one operation. The sealing chemicals form an impermeable barrier around the outside of the pipe that permanently seals the joint against both exfiltration and infiltration. Root control chemicals may be added to the sealing gels to block further root intrusion. CUES Test 'N Seal Control Center has added speed and efficiency to the sewerline rehabilitation industry. The CUES Multi-Grout pumping system allows the operator to choose the sewer grout most appropriate for the job. The CUES TV/Seal unit provides video tape recording equipment and Data View signal generators as standard features of the system. This equipment allows for a permanent record to be made of the inspection, testing and sealing procedure. With the use of video tape and Data View, those responsible for seeing that sewer systems meet the requirements of the pertinent regulations can quickly review a maintenance crew's whole day... saving time and eliminating expensive guesswork.

CUES electric powered remote controlled winches and cable reels are included as standard equipment in the TV/Seal unit. The remote power winch and the power cable reel control the two-way movement of the camera-packer assembly, and are operated from the control room. The operator controls the movement of the camera and the packer, performs the pressure testing of the joints with the Posatryn test assembly, and monitors the television screen from the unit's control room, which is heated and air conditioned, and has adequate storage compartments for accessory items. Chemical and water storage tanks are in the rear of the vehicle along with the TV cable and sealing hose reels and the other downhole equipment. The TV/Seal unit is ruggedly designed to meet the needs of all cities, contractors and municipalities, yet the entire unit can be efficiently operated by one or two men.

Protecting our environment is the major concern of this decade. Sanitary sewer systems are under scrutiny. Municipalities and all owners of sewer systems are moving to correct infiltration problems. Now is the time to plan your total evaluation and infiltration control program. Achieve your program goals with CUES Television and Sealing equipment ... superior sewer infiltration control products from CUES — "The Standard of the Industry."



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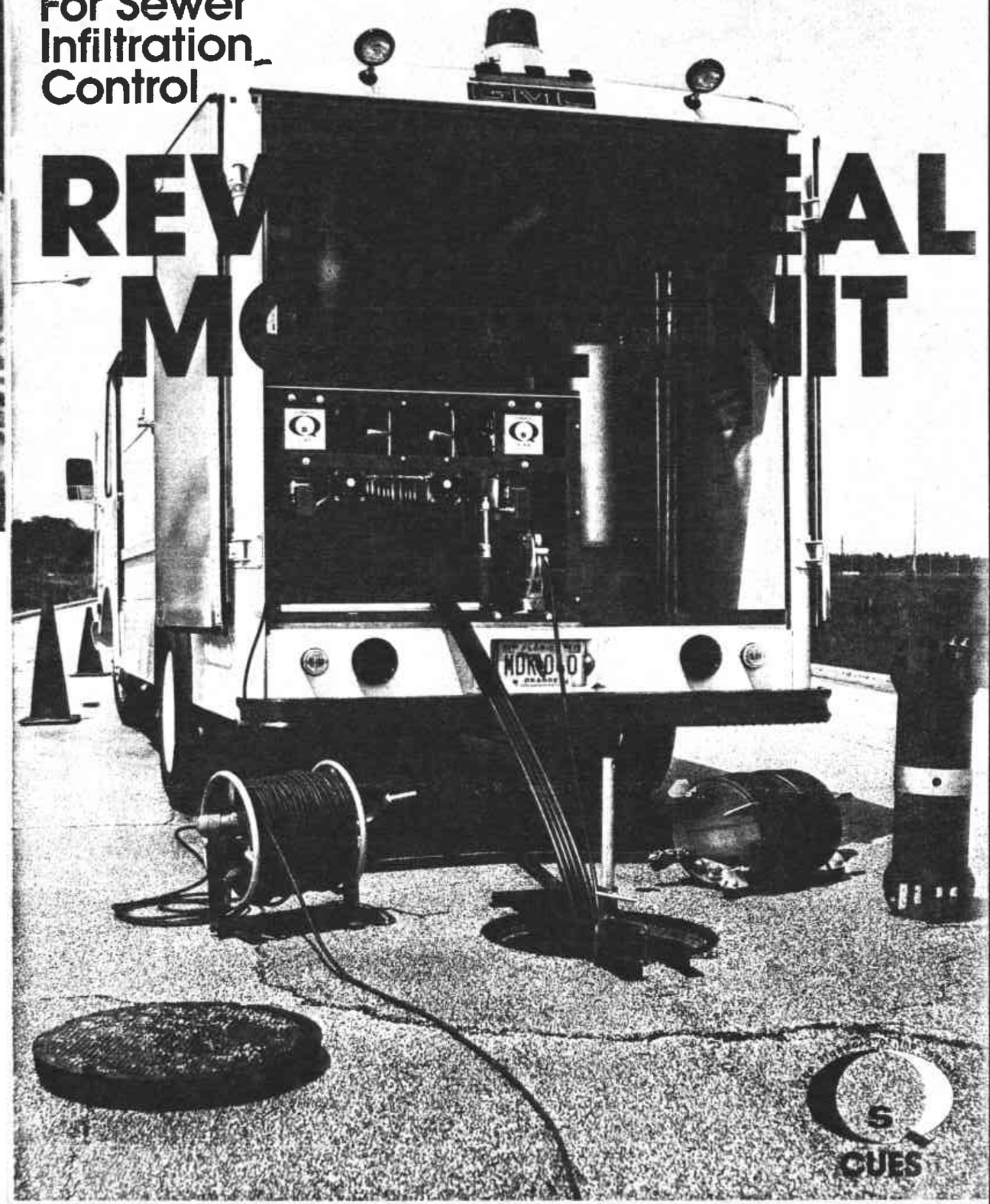

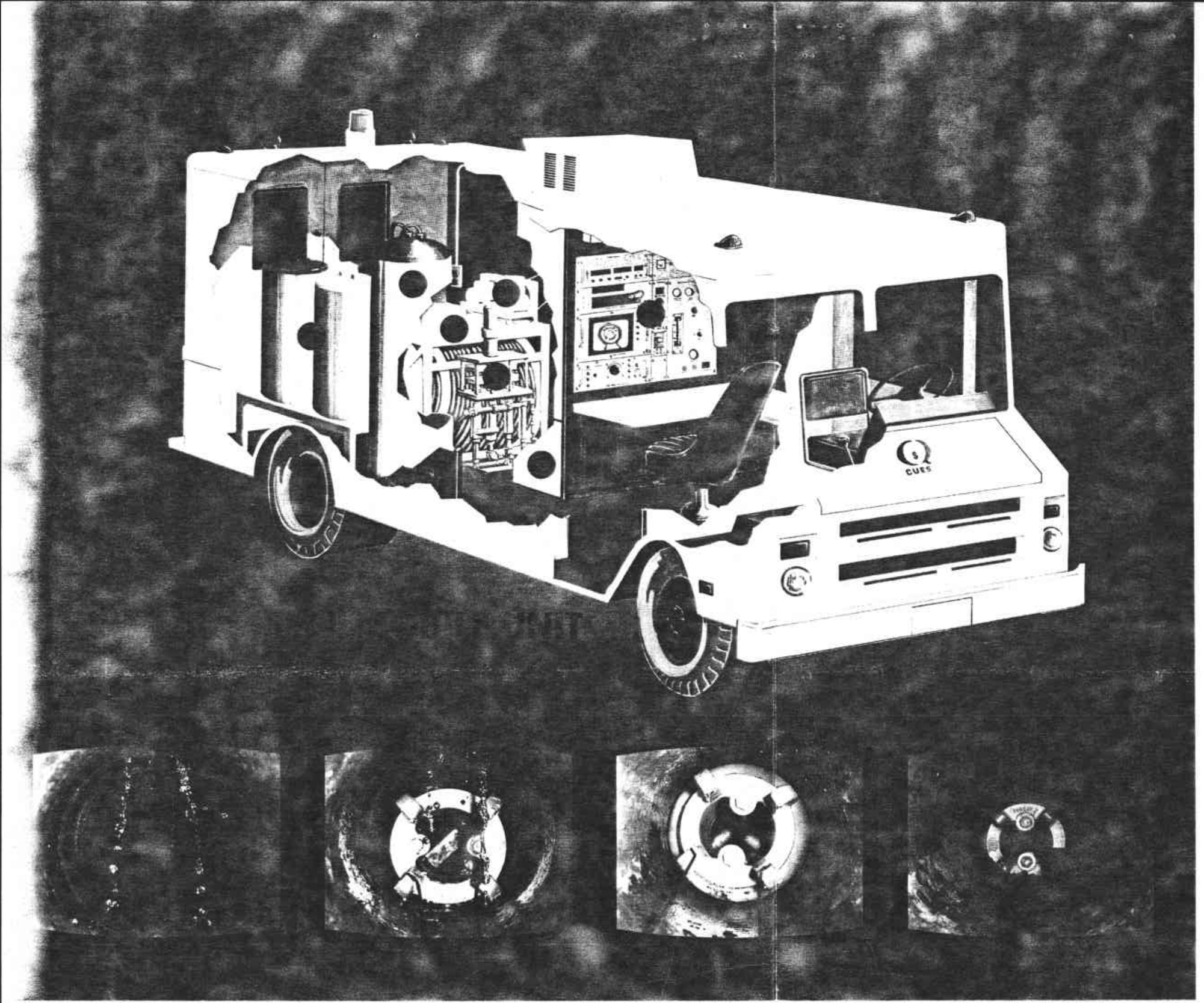

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