



Department of Energy

Idaho Operations Office
West Valley Project Office
P.O. Box 191
West Valley, NY 14171

January 18, 1990

Distribution List Attached

SUBJECT: NDA Interceptor Trench at the West Valley Demonstration Project

Dear Messrs:

Construction will begin around January 24, 1990 on an interceptor trench to preclude further movement of solvent from the NRC Licensed Disposal Area (NDA) at the West Valley Demonstration Project.

The enclosed documents describe the approach that is being taken. Also, the enclosed press release will be issued January 23, 1990. If you have any questions regarding this issue, please contact my office at 716-942-4312 or FTS 473-4312.

Sincerely,

Tom Rowland
for W. W. Bixby, Director
West Valley Project Office

Enclosures: Attachment (1) Memorandum W. W. Bixby to J. E. Solecki, dated January 16, 1990, Attachment (2) Letter R. E. Lawrence to W. W. Bixby, dated January 15, 1990, Attachment (3) Press Release, January 16, 1990

cc: J. E. Solecki, DOE-ID, w/encl.
T. W. McIntosh, DOE-EM, w/encl.

TJR:004:90 - 1852:89:10

TJR:t1

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*additional information
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ADD: LRDR

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United States Government

Department of Energy

memorandumIdaho Operations Office
West Valley Project Office

DATE: January 16, 1990

SUBJECT: NDA Interceptor Trench

J. E. Solecki, Acting Assistant Manager
TO: for Nuclear Programs

Further to my memoranda to you dated January 2, 1990, and January 5, 1990, describing possible technical approaches to resolving potential groundwater flow issues at the NRC licensed disposal area (NDA), West Valley Nuclear Services (WVNS) in cooperation with Dames & Moore, have submitted a technical recommendation to proceed with partial installation of the NDA solvent interceptor trench. The letter recommending this action is attached for your use and information. The recommendation is based on the difficulty of accurately predicting solvent flow rates in groundwater, the perceived risk of no action and that the trench installation can proceed at a staged rate which will yield confirmatory geohydraulic and contamination data.

I believe the most technically prudent course of action is to proceed to install a 100 foot section of the proposed trench as soon as feasible. Once completed, the first section of trench will provide data upon which a decision can be made whether or not to proceed with the remaining sections. The costs to perform this facility maintenance effort is to be charged to Project funds and I have requested all costs for this activity be identified.

I have initiated notification to state and federal regulatory agencies of this approach to resolving groundwater issues at the NDA. If you have any questions concerning the installation of the interceptor trench as described above, please contact me.

Tom Rowland
for W. W. Bixby, Director
West Valley Project Office

Attachment

cc: T. W. McIntosh, DOE-EM
S. J. Harbison, NYSERDA

EM:004:90 - 1852:89:10

EM/sl

ATTACHMENT 2



West Valley
Nuclear Services Company
Incorporated

ACTION
WD:1777

P.O. Box 191
West Valley, New York 14171-0191

Dr. W. W. Bixby, Director
West Valley Project Office
Department of Energy
P.O. Box 191
West Valley, New York 14171-0191

January 15, 1990

Dear Dr. Bixby:

SUBJECT: NDA Interceptor Trench

- Reference: (1) Letter WD:89:0926, R.E. Lawrence to W.W. Bixby, "Actions to Control Movement of Solvent Material in the NDA," dated November 21, 1989
- (2) Letter WD:90:0003, T.G. Weiss, Jr. to W.W. Bixby, "Transmittal of Report on Characterization of Solvent Leakage and Migration," dated January 2, 1990

The purpose of this letter is to strongly recommend proceeding with installation of the NDA solvent interceptor trench, as described in Reference (1), in parallel with application for modification of the Project's SPDES permit and NEPA memorandum to file approval. WVNS recommends this action on the basis that it is the next logical step in a planned approach of risk containment for the NDA solvent material.

As you are aware, discussions between Project and NYSDEC personnel on December 13, 1989, addressed specifics of the regulatory considerations for installation of the proposed trench, and for collection, processing, and discharge of ground water expected to infiltrate the trench. Based on these discussions and absence of any characteristic hazardous wastes, WVNS understands that the only regulatory permitting required for the proposed action is modification to the Project SPDES permit, approval of which can be expected to take a minimum of three and one-half months following submittal of the application. Additionally, the Project anticipates that NYSDEC will require both flow rate and sample analysis data for water actually entering the trench in order to complete review and approval of a permit modification request.

As discussed with you on January 5 and January 12, WVNS believes it prudent to proceed with installation of the proposed interceptor trench expeditiously for several reasons:

- Available modeling and data cannot accurately predict the rate at which the solvent material migrates. The solvent has been detected in the last set of monitoring wells in the direction of migration. Careful monitoring has occurred since the presence of solvent was first detected in November 1983; evidence of further migration in August 1988 resulted in the Characterization Study conducted in 1989 (Reference 2).
- Proactive efforts to intercept solvent material now are considered preferable to the possibility of remedial efforts if solvent should move off-site.

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Dr. W.W. Bixby

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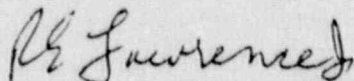
- Environmental impact of the trench, without pumping, will be effectively the same as the present network of monitoring wells and no trench. Decisions regarding the pumping routine will be tailored to the actual conditions experienced during and after installation.
- Installation can be accomplished in stages, allowing both confirmation of ground water inflow rates and ground water contamination characteristics. The total extent of the planned trench is a length of 900 feet. A 200-foot initial section is recommended. Characterization of in-leakage will be conducted after the first 100-foot section of trench has been installed.

Reference (2) submitted the final report on characterization of the solvent leakage and migration in the NDA. Installation of the interceptor trench is recommended in the report. In finalizing the report from the draft version previously provided to you, WVNS obtained a peer review of the report, including the trench recommendation.

Approximately three working days of preparatory work (removal of interfering monitoring wells and construction road installation) remain before field readiness for trench construction. Construction materials are on-site. Readiness to proceed with initial trench construction is expected to be achieved by January 22. A final review of readiness using both WVNS and outside reviewers will be conducted prior to this date.

Your concurrence with proceeding with installation of the interceptor trench, as described above, is requested. If you have any questions concerning this matter, please contact me.

Very truly yours,



R. E. Lawrence, Jr., Manager
Plant Services
West Valley Nuclear Services Co., Inc.

REL:mah/kmg

CA:90:0002

cc: Mr. E. Maestas, DOE-WVPO
Mr. T.J. Rowland, DOE-WVPO

MAH1493

1 FOR APPROVAL ONLY

DRAFT 5, January 16, 1990

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3 Contact: John Chamberlain

4 Telephone: (716) 942-4610

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8 West Valley, N.Y., December x--The Department of Energy's (DOE)
9 West Valley Demonstration Project (WVDP) has begun installation
10 of a ground water collection system along the north and northeast
11 boundaries of the closed Nuclear Regulatory Commission-licensed
12 disposal area. System installation was recommended in a recently
13 completed study of the disposal area by the DOE's management and
14 operating contractor, West Valley Nuclear Services, Inc. The
15 system will enhance confinement of radioactively contaminated
16 kerosene disposed of in the late 1960's and early 1970's by the
17 site's former operator. The kerosene was used by the former site
18 operator during reprocessing of nuclear fuel.

19
20
21 The WVDP conducts an extensive routine environmental monitoring
22 program. In 1983, this routine monitoring detected radioactively
23 contaminated kerosene in a monitoring well sample from the
24 disposal area. Subsequent investigation showed that the kerosene
25 had leached from tanks containing a granular clay material used
26 to absorb the kerosene.

27

1 In 1985, eight of twenty-two tanks and associated contaminated
2 soil were exhumed, packaged and stored on-site. The recently
3 completed study was conducted to increase understanding of the
4 behavior of kerosene in and around the remaining fourteen tanks.
5 Additional sampling wells were installed and soil gas testing
6 carried out. Based on this study and recent identification of
7 kerosene in two additional ground water sampling locations,
8 efforts are underway to install the ground water collection
9 system as a prudent environmental measure.

10
11 This will confine the kerosene within the disposal area, where it
12 can be collected and treated. Groundwater collected by the
13 system will be transferred to a temporary storage tank, tested
14 for the presence of organic materials and radionuclides,
15 stabilized and treated on-site. Monitoring data continue to
16 confirm that no kerosene has been released offsite.

17
18 The West Valley Demonstration Project is being conducted on a
19 portion of the Western New York Nuclear Service Center (Center)
20 owned by the State of New York. The DOE assumed control of a
21 200-acre section of the Center in 1982 to solidify approximately
22 600,000 gallons of high-level liquid nuclear waste (HLW). The HLW
23 is a byproduct of nuclear fuel reprocessing conducted at the site
24 from 1966-72. Solidified in a safe, durable glass form the HLW
25 will be suitable for shipment to a Federal repository.

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1 Additional environmental studies are underway as part of the
2 Environmental Impact Statement (EIS) initiated last year. The
3 EIS will evaluate alternatives for completion of the Project by
4 DOE after the high-level radioactive waste is solidified, and
5 closure of the Center by the State of New York following Project
6 completion. The EIS is consistent with the Secretary of Energy's
7 commitment, announced in June as part of his 10-Point Initiative,
8 to improve the Department's compliance with the National
9 Environmental Policy Act.

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