KAISER ALUMINUM
CORPORATE ENVIRONMENTAL

February 23, 2001

Mr. John Buckley
Nuclear Regulatory Commission
TWFN, 7F27
Washington, DC 20555-0001

40-2377

Re: Kaiser Tulsa Adjacent Land Remediation Modification of Approved Adjacent Land Remediation Plan

Dear Mr. Buckley:

As we discussed by telephone, during remediation of Grids 1, 2, 3 and 4, a buried concrete spillway as encountered on the railroad right-of-way immediately adjacent to the Kaiser property fence line. The spillway was apparently constructed prior to 1958 to control overflow from the Freshwater Pond to the Retention Pond. In the1960's the spillway was filled with dross and trash.

During the recent excavation of Grids 1, 2, 3 and 4 the spillway acted as a conduit for water from both to the Fresh Water Pond and the Retention Pond to flood the excavation. The presence of flowing water made it infeasible to clean up the northern half of Grids 1, 2, 3 and 4. Since the area is immediately adjacent to areas that will be addressed in our Phase 2 decommissioning plan and since most of the concrete spillway is inside Kaiser's fence line, Kaiser's consultant, Earth Sciences Consultants, Inc. (ESC) recommended deferring the northern portion of Grids 1, 2, 3 and 4 to Phase 2. Details concerning the buried spillway are provided in the attached ESC letter report.

This letter, and the attached, constitute a modification to Kaiser's approved Adjacent Land Remediation Plan. Please provide NRC approval at your earliest convenience. If you have any questions concerning this matter, call me at 225/231-5116.

Very truly yours,

Bill Vinzant

J. W. (Bill) Vinzant, P.E.
Manager, Corporate Environmental Affairs

JWV/shh

MMSSOIPublic

SUITE 1A, BATON ROUGE, LA 70809-1957

cc: Mr. Louis Carson II – United States Nuclear Regulatory Commission
Ms. Pamela Bishop – Oklahoma Department of Environmental Quality
Mr. Stephen L. Jantzen – State of Oklahoma
Dr. Max Scott – ADA Consultants
John Donnan – Houston
Lamar Nichols – Tulsa
Dave Tourdot – Earth Sciences
Al Gutterman – Morgan, Lewis & Bockius
Turgay Ertugrul – A&M
Paul Handa – Tulsa
U.S.N.R.C., Document Control Desk
Scott Van Loo – City of Tulsa
Mr. Harry Patterson – Union Pacific Railroad
File – Tulsa – 3.12.14.03

Earth Sciences Consultants, Inc.

One Triangle Lane • Export, Pennsylvania 15632 • Phone: (724) 733-3000 • Fax: (724) 325-3352
Akron, Ohio • Philadelphia, Pennsylvania

February 16, 2001
Project No. 5427F-01

J. W. (Bill) Vinzant, P.E
Regional Environmental Manager
Kaiser Aluminum & Chemical Corporation
Corporate Environmental Affairs
9141 Interline Avenue, Suite 1A
Baton Rouge, LA 70809-1957

Buried Spillway

Dear Mr. Vinzant:

On February 7, 2001, remediation activities were started in the area of Survey Unit 4C which consists of Characterization Grids 1, 2, 3, and 4. Although this subunit is not isolated from surrounding grid areas, it was broken out due to the expected depth of excavation. Another concern associated with this area is that of a buried spillway connecting the Fresh Water Pond and the Retention Pond.

Review of historical aerial photographs indicated that there had been a spillway connecting the two ponds. A 1950 photograph shows that the Fresh Water Pond discharged via an apparent spillway or over-flow at its southeast corner. Water flowed through this spillway to a pond to the east (now the Retention Pond). This feature precedes construction of the manufacturing facility. In a 1958 aerial photograph, the spillway between the Fresh Water Pond and the Retention Pond is clearly evident. The manufacturing facility is in a stage of late construction and/or early operation. Therefore, the spillway almost certainly was constructed prior to generation of any thorium dross. By 1964, a trench/channel (now Fulton Creek) has been constructed on the north side of the property to convey water from the Fresh Water Pond. The old spillway on the south end of the pond was abandoned and partially filled.

Earth Sciences Consultants, Inc.'s interpretation of the approximate location of the buried spillway was overlaid on the site characterization map. The area in question is shown in the enclosed Figure 1. As shown in this figure, the spillway lies primarily on Kaiser Aluminum & Chemical Corporation (Kaiser) property but does intersect adjacent area Grids 1, 2, 3, and 4.

During excavation activities on February 7, 2001, the spillway was located and a significant portion of it was unearthed. As expected, the spillway appears to have been backfilled with a significant amount of thorium-bearing material. However, the amount of thorium-bearing material outside of the spillway is minimal and concentrated around a Sprint fiber-optic cable that lays at the edge of the southern wall of the spillway. The northern wall of the spillway, which is on Kaiser property, was not found during the excavation activities that took place on February 7. Therefore, the exact width of the spillway is unknown but is anticipated to be around 30 to 40 feet.

The spillway itself appears to be in good condition. The floor as well as the southern wall are intact and do not appear to be cracked or damaged. Since the spillway was put in before the thorium-related activities started, it is strongly believed that the thorium-bearing material is located only on the surface of the spillway structure and not below the concrete structure.

As excavation continued in the area, reaching depths of approximately 20 feet, a severe water problem was encountered. The old spillway appears to be hydraulically connected to both the Fresh Water Pond and Retention Pond. At the working depth, large quantities of water from one or both of the ponds enter the excavation. This condition which severely impedes the remediation effort will be extremely difficult to control as long as the ponds contain water. Therefore, we recommend that excavation in the immediate area of the buried spillway be discontinued temporarily. This area can be addressed in the future as part of the on-site decommissioning project. The area is relatively small and proximate to the Kaiser property.

Specifically, we recommend that remediation proceed in the southern two quadrants of Characterization Grids 1 through 4. The remaining northern quadrants of Characterization Grids 1 through 4, which are located within the spillway, will be addressed during the on-site remediation activities. This approach is more realistic since water levels in the two on-site ponds may be lowered by closure of the Fresh Water Pond and/or other methods as part of the on-site decommissioning effort. We expect that this will alleviate the current difficulties associated with this area.

We will remediate the two southern quadrants of each of the Characterization Grids 1 through 4, up to and including the Sprint fiber-optic cable. Four soil samples will be collected in each of the grids. Two surface samples (one per quadrant) and two side wall samples (one per quadrant) will be obtained, where applicable. All final status surveys will be taken in accordance with the approved plan. Following remediation, the western, southern, and eastern walls of the survey unit will be lined with 60-mil high-density polyethylene liner, or equivalent, and backfilled to the specifications of the Adjacent Land Remediation Plan. This will allow release of the 25-foot strip along the railroad as well as clear the fiber-optic cable area. Concurrently, the spillway will be backfilled. Due to the depth and size of the hole, it should not be left open any longer than it needs to be.

Photographs taken on February 8, 2001, which help to illustrate conditions encountered in the spillway area, are enclosed (Attachment A).

If you have any questions or wish to discuss any aspect of this issue, please contact us.

Sincerely,

Daniel S. Baker
Health Physicist

Alan J. Shuckrow, Ph.D.
Senior Manager
Engineering Department

DSB/AJS:bd

Enclosures

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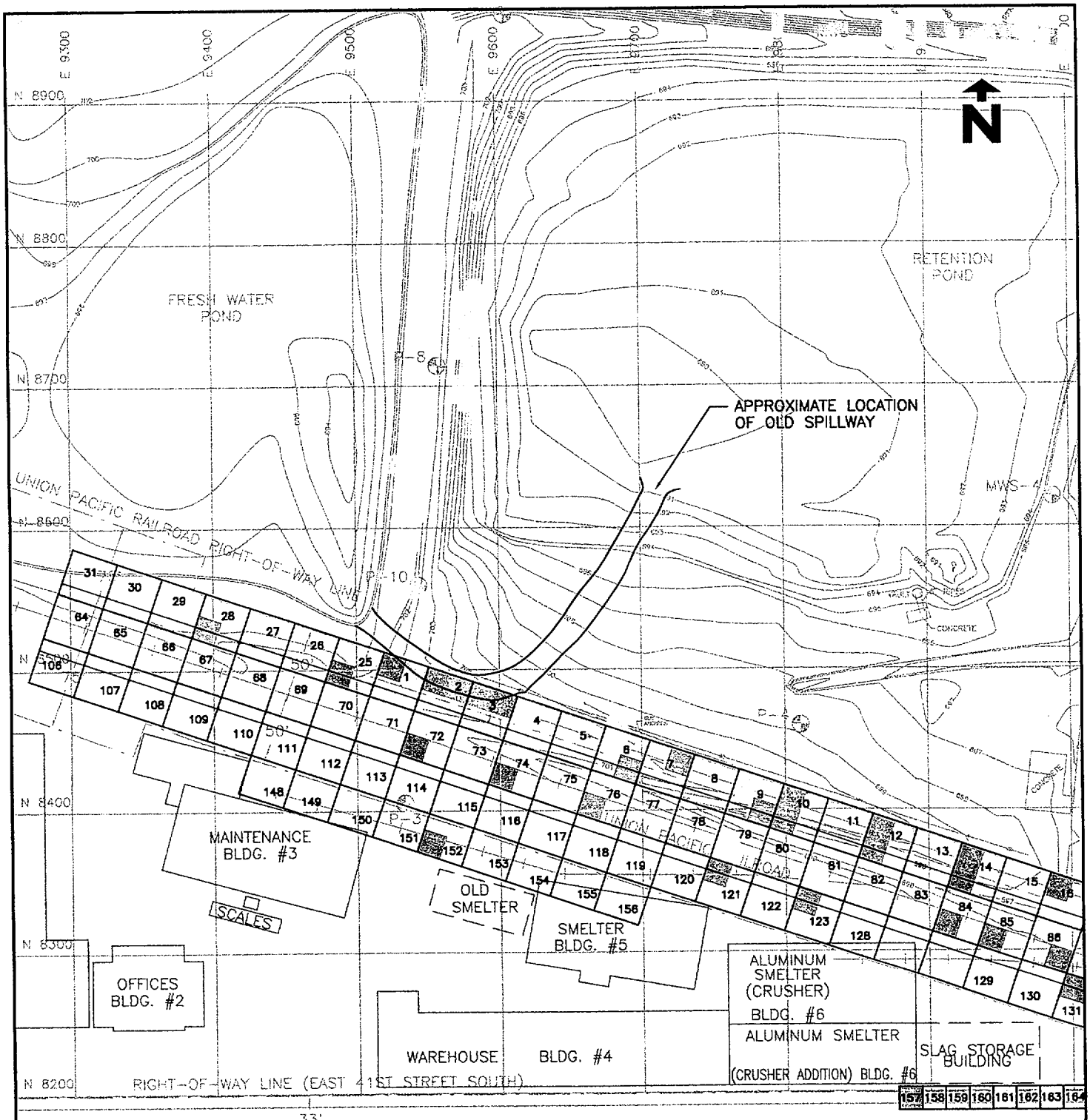
Figure



REFERENCES

1. THE RIGHT-OF-WAY AND PROPERTY LINES WERE OBTAINED FROM PLAT OF SURVEY PREPARED BY DENTON & WHITE SURVEYING COMPANY SEALED ON FEBRUARY 14, 1964.
2. BUILDING LOCATIONS AND OUTLINES WERE DETERMINED FROM KAISER PLANT UTILITIES CUT-OFFS DIAGRAM, DATED 2/89.
3. TOPOGRAPHIC INFORMATION WAS OBTAINED FROM TOPOGRAPHIC SURVEY OF PART OF THE SE/4 OF SECTION 23 TOWNSHIP 19 NORTH RANGE 13 EAST, OF THE I.B. & M., TULSA COUNTY, STATE OF OKLAHOMA, ACCORDING TO THE U.S. GOVERNMENT SURVEY THEREOF, AND KNOWN AS 7311 EAST 41st STREET SOUTH. (FILE: NFSK003.DWG REV. A)
4. OUTLINE OF TRASH PILES COMPILED FROM 1964 AND 1967 AERIAL PHOTOGRAPHS.
5. LOCATION AND OUTLINE OF OLD SMELTER TAKEN FROM 1958 AERIAL PHOTOGRAPHS.

FIGURE 1
INTERPRETED SPILLWAY LOCATION

KAISER ALUMINUM
TULSA, OKLAHOMA

PREPARED FOR

KAISER ALUMINUM & CHEMICAL CORPORATION
BATON ROUGE, LOUISIANA

APPROVED	2/16/01
CHECKED	
DRAWN	DEB 02/13/01
DRAWING NUMBER	5427A222

Earth Sciences Consultants, Inc.

Attachment A

Photographs