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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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USNRC

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD '94 JAN -5 P5:20

In the Matter Of

Sequoyah Fuels Corporation  
and General Atomics

(Gore, Oklahoma Site Decontamination  
and Decommissioning Funding)

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Docket No. 40-8027EA  
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**NATIVE AMERICANS FOR A CLEAN ENVIRONMENT'S  
REPLY TO SEQUOYAH FUELS CORPORATION'S ANSWER  
IN OPPOSITION TO NACE'S MOTION TO INTERVENE**

**Introduction**

On November 18, 1993, Native Americans for a Clean Environment ("NACE") moved to intervene in a hearing requested by the Sequoyah Fuels Corporation ("SFC") and General Atomics ("GA") regarding the NRC's October 15, 1993, order to SFC and GA to comply with the decommissioning financing requirements in 10 C.F.R. § 40.36, including the provision of guaranteed decommissioning funds in the amount of 86 million dollars.<sup>1</sup> Native Americans for a Clean Environment's Motion for Leave to Intervene in Proceeding Regarding Sequoyah Fuels Corporation's and General Atomics' Appeal of Nuclear Regulatory Commission's October 15, 1993 Order (hereinafter "NACE's Motion"). NACE sought to intervene in support of the Order because SFC's and GA's hearing requests trig-

<sup>1</sup> Order, in the Matter of Sequoyah Fuels Corporation General Atomics (Gore, Oklahoma, Site Decontamination and Decommissioning Funding), 58 Fed. Reg. 55,087 (October 25, 1993) (hereinafter "October 15th Order").

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gered a potentially adverse result for NACE's members if the Order was not sustained. If the Order were overturned, the facility would remain in its earlier condition, which is detrimental to public health and safety.

The NRC Staff does not oppose NACE's intervention motion. The Staff agrees that assuming it later submits a valid contention, NACE has the right to intervene in this proceeding, since a hearing request was made by the licensee, since NACE seeks only to assure that the Order is sustained, and since NACE has demonstrated that it has standing. However, SFC and GA oppose SFC's motion. Sequoyah Fuels Corporation's Answer in Opposition to NACE's Motion to Intervene (December 6, 1993) (hereinafter "SFC Answer"); General Atomics' Answer in Opposition to NACE's Motion to Intervene (December 6, 1993) (adopting and incorporating by reference SFC's arguments).

SFC makes essentially two arguments against NACE's intervention: first, that NACE filed its request to intervene late, without satisfying the NRC's standard for late intervention; and second, that NACE lacks standing to intervene in this proceeding. As discussed below, neither of these arguments has merit. Moreover, even if the Board finds that NACE has no right to intervene in this proceeding, it should exercise its discretion and admit NACE as a participant in the case.

**I. THE TIMING OF NACE'S HEARING REQUEST DOES NOT PRECLUDE INTERVENTION.**

**A. NACE's Hearing Request Was Timely.**

SFC first contends that NACE's request to intervene was "late" under "the plain terms" of the October 15 Order, because it was not filed before the deadline for hearing requests established by the Order. SFC Answer at 9. To the contrary, the "plain terms" of the Order did not include NACE among those parties who were offered the opportunity to request a hearing within 20 days. Rather, the offer was extended only to SFC, GA, or "any other person who is adversely affected by this Order." 48 Fed. Reg. at 55,092, Col. 2 (emphasis added). As discussed in NACE's Motion, NACE was not "adversely affected" by the Order, since imposition of the Order would not lessen public health or safety. NACE Motion at 4. Indeed, NACE applauded the Order as a "vital first step toward providing reasonable assurance that the SFC site will indeed be cleaned up." Id. Thus, on its face, the Order did not offer NACE the opportunity to request a hearing.

Moreover, under the D.C. Circuit's decision in Bellotti v. NRC, 725 F.2d 1380, 1381 (D.C. Cir. 1983) (hereinafter "Bellotti"), NACE was precluded from challenging the adequacy of the Order; thus, NACE had no standing to claim that it was "adversely affected" by virtue of its belief that the Order did not go far enough in protecting public health and safety. The potential adverse affect on NACE's interest only arose when GA and SFC requested a hearing on whether the Order should be sustained: if GA and SFC prevailed in this proceeding and

escaped the requirements of 10 C.F.R. § 40.36, or if the Order were weakened as a result of the proceeding, the safe and complete decommissioning of the SFC site would be jeopardized, thus threatening the interest of NACE and its members in a safe and healthful environment. Accordingly, upon receiving notice of SFC's and GA's hearing request, NACE promptly requested leave to intervene.

In support of its argument, SFC cites a 1992 letter in a byproduct material licensing case, in which Licensing Board Chairman G. Paul Bollwerk, III, informed counsel for the licensee that "only those persons who submit a hearing request" are eligible for party status in an enforcement proceeding, and that an "interested person" who wishes to obtain party status after the time specified for filing a hearing request has expired "is obliged to petition for late-intervention." SFC Brief at 10, quoting Letter from Administrative Judge G. Paul Bollwerk, III, to Mark S. Meadows (February 18, 1992), filed in the docket of Lafayette Clinic (Order Modifying Byproduct Material License No. 21-864-02), EA 91-130 (February 18, 1992). However, SFC's interpretation of that letter is overbroad. Judge Bollwerk's letter was written to counsel for a licensee, which clearly would have been eligible to request a hearing as an "interested person" within the time prescribed by the NRC's hearing offer, and thus would have been subject to the requirements for late-intervention if it had delayed in submitting its hearing request. In contrast, as SFC acknowledges, NACE was not eligible to request a

hearing under the terms of the October 15th Order. In fact, under Bellotti, no hearing could have been initiated at all if SFC and GA had not requested one. Thus, the October 15th Order gave NACE no right to petition to intervene to which lateness could have attached. Accordingly, SFC's argument that NACE's request to intervene is "late" should be rejected as both illogical and inconsistent with NRC regulations.

**B. In the Alternative, NACE Satisfies the Requirements for Untimely Intervention.**

As discussed above, NACE's request to intervene in the decommissioning funding hearing was timely; thus, NACE was not required to address the criteria for late-intervention in 10 C.F.R. § 2.714(a)(1). Assuming for purposes of argument that NACE's hearing request was late and that these criteria apply, however, they have been satisfied.<sup>2</sup>

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<sup>2</sup> SFC argues that NACE may not address the late-intervention criteria in this reply. SFC Answer at 10, citing Boston Edison Co. (Pilgrim Nuclear Power Station), ALAB-816, 22 NRC 461, 466 (1985). However, as the Appeal Board noted in Boston Edison, the Licensing Board may allow an intervenor to address these criteria in a responsive pleading as a matter of discretion. Id. at 468. Such an exercise of discretion is clearly required here, as a matter of "justice and fair play." Armed Forces Radiobiology Research Institute (Cobalt-60 Storage Facility), LBP-82-24, 15 NRC 652 (1982), rev'd. on other grounds, ALAB-682, 16 NRC 150 (1982). NACE should not be penalized for having "relied to [its] detriment" on the plain language of the October 15 Order, which did not include NACE as a party adversely affected by the Order who was required to file its intervention motion by November 4. Id. In any event, NACE provided much of the information relevant to its satisfaction of the late-intervention standard in its Motion for Leave to Intervene, even though it did not expressly address the standard.

First, contrary to SFC's argument (SFC Answer at 11), NACE has good cause for filing late. As explained in NACE's Motion for Leave to Intervene, NACE had no right or reason to request a hearing on the October 15th Order until SFC and GA requested one on November 2, 1993. SFC's and GA's hearing requests were served on NACE and other parties to the SFC license renewal proceeding by first-class mail on November 4, 1993. Thus, NACE learned of the hearing requests on or about November 8, 1993. NACE then requested permission to intervene within 10 days of receiving notice of the hearing requests. Thus, NACE not only had good cause for filing its motion to intervene late, but filed it within a brief period of learning of SFC's and GA's hearing requests.<sup>3</sup>

Second, it is quite obvious that there are no "other means" available for protecting NACE's interest in seeing that the October 15th Order is fulfilled. 10 C.F.R. § 2.714(a)(1)(ii). The only possible alternative forum for resolving the conflicting claims of SFC, GA, the NRC, and NACE, regarding the applicability of 10 C.F.R. § 40.36 and the adequacy of decommissioning funding

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<sup>3</sup> SFC's suggestion (SFC Answer at 11) that NACE should have anticipated that SFC and GA would request a hearing, and therefore filed its own intervention request earlier, is silly. NRC procedural regulations do not require citizen intervenors to predict the future. Nor, contrary to SFC's claim, did NACE have cause to believe that a hearing request by SFC and GA was inevitable: SFC had not resisted many previous enforcement orders by the NRC, including the 1991 shut-down order, EA-91-067, the December 29, 1992, Demand for Information regarding SFC's and GA's ability to finance the decommissioning of the SFC plant, and the NRC's July 2, 1993, Supplemental Demand for Information.

would have been the license renewal proceeding, which was pending at the time of NACE's hearing request. However, the Licensing Board has now dismissed that proceeding, leaving no prospect that the adequacy of decommissioning funding will be litigated in an adjudicatory proceeding at any time in the near future. Sequoyah Fuels Corp. (Source Materials License No. Sub-1010), LBP-93-25, \_\_\_ NRC \_\_\_ (December 10, 1993).<sup>4</sup>

Absurdly, SFC proposes that NACE can protect its interest by filing an enforcement petition under 10 C.F.R. § 2.206. SFC Answer at 11. However, the NRC has already decided to take enforcement action against SFC and GA, and thus a § 2.206 petition seeking enforcement of the October 15th Order would be pointlessly redundant. What NACE seeks here, and what cannot be duplicated in any other proceeding, is the opportunity to participate in and influence the outcome of the pending adjudication of conflicting claims between the NRC and GA and SFC regarding GA's and SFC's decommissioning obligations for the SFC plant.<sup>5</sup>

Third, NACE's participation reasonably may be expected to assist in the development of a sound record. In its Motion for Leave to Intervene, NACE asserted that it would provide "expert testimony" regarding the costs of decommissioning the SFC facil-

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<sup>4</sup> NACE intends to appeal this decision to the Commission.

<sup>5</sup> It should be noted with irony that even if NACE were to bring a successful § 2.206 petition and convince the NRC Staff to commence an enforcement action against SFC, if SFC requested a hearing, NACE would still have to petition to intervene in that proceeding -- and no doubt would be faced with the same arguments against its intervention that SFC is making now.



ity. NACE Motion at 6. This expert testimony will be provided by Dr. Arjun Makhijani, President of the Institute for Energy and Environmental Research ("IEER"), who has extensive experience in the field of nuclear engineering, including technologies and costs associated with nuclear waste containment and disposal.<sup>6</sup> Dr. Makhijani, who has been a technical consultant to NACE for several years, is very familiar with decommissioning issues regarding the SFC facility.

Fourth, there are no other existing parties who can adequately represent NACE's interests in this proceeding. SFC argues that there is "an identity" between the interests of NACE and the NRC Staff, and that the "general public interest" which NACE seeks to vindicate "is presumptively represented fully and adequately" by the Staff. However, it is a matter of long-standing precedent that the NRC Staff cannot be presumed to represent the interests of a late petitioner. See Washington Public Power Supply System (WPPSS Nuclear Project No. 3), ALAB-747, 18 NRC 1167, 1174-75 (1983) and cases cited therein. Moreover, as was the case in Dairyland Power Cooperative (LaCrosse Boiling Water Reactor), LBP-80-26, 12 NRC 367, 372 (1980) (hereinafter "LaCrosse"), the NRC Staff may retract all or part of its Order at some later point, leaving NACE without any advocate for its view that the Order should be fully enforced.

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<sup>6</sup> A copy of Dr. Makhijani's professional qualifications is included as Attachment A.

Finally, NACE's participation in this proceeding would not substantially broaden or delay this proceeding, because NACE is precluded from advocating any measures beyond the scope of the October 15th Order.<sup>7</sup> Nor would admission of NACE as an intervenor "substantially delay" the proceeding, as SFC claims in its Answer at page 13. SFC's complaints that NACE's presence in the case will generally complicate and therefore lengthen the proceeding because of confidentiality concerns are simply irrelevant to the Board's weighing of this factor: the Board may consider "only that delay which can be attributed directly to the tardiness of the petition." South Carolina Electric and Gas Co. (Virgil C. Summer Nuclear Station, Unit 1), LBP-81-11, 13 NRC 420, 425 (1981), citing Long Island Lighting Co. (Jamesport Nuclear Power Station, Units 1 and 2), ALAB-292, 2 NRC 631, 650 n. 25 (1975). Issues regarding the handling of purportedly confidential commercial information submitted during the proceeding exist independent of any delay caused by late intervention. NACE filed its request to intervene just 14 days after the November 4 deadline for filing a hearing request under the October 15th Order. At most, NACE's intervention has delayed the proceeding by only two weeks -- an insignificant period in comparison with the many months the proceeding can be expected to take.<sup>8</sup>

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<sup>7</sup> As stated in NACE's Motion at 3, "NACE seeks leave to intervene for the purpose of advocating the legal authority for and reasonableness of the October 15 order."

<sup>8</sup> It should also be borne in mind that the Licensing Board could not have entertained a request to intervene by NACE before November 2, the date that SFC and GA filed their own hearing requests.

Accordingly, even if the Board decides that the five criteria for late-intervention are applicable, it is clear that NACE has satisfied them.

**II. NACE IS ENTITLED AND HAS STANDING TO INTERVENE IN THIS PROCEEDING.**

Under NRC regulations, NACE may intervene here if it can show it is a "person whose interest may be affected by a proceeding." 10 C.F.R. § 2.714(a)(1). In making the determination that NACE qualifies for intervention, the Licensing Board must consider three factors: (1) the nature of NACE's right under the Atomic Energy Act to be made a party to the proceeding; (2) the nature and extent of NACE's interest in the proceeding; and (3) the possible effect on NACE's interests of any order that may be entered. 10 C.F.R. § 2.714(d)(1). These factors have been interpreted as requiring an evaluation of NACE's standing.

Contrary to the arguments made by SFC, and as previously established in NACE's intervention motion, consideration of these three factors establishes that NACE should be admitted as an intervenor in this proceeding.

- A. NACE is entitled to intervene in this proceeding under the Atomic Energy Act, NRC regulations, and NRC precedent.

NACE's right under the Atomic Energy Act to be made a party to this proceeding is founded both in § 189a of the Atomic Energy Act and 10 C.F.R. § 2.714. LaCrosse, 12 NRC at 372. SFC claims that § 189a does not confer any hearing rights on NACE in this instance, because the October 15th Order does not explicitly involve the "granting, suspending, revoking, or amending," of SFC's license. SFC Answer at 14, quoting 42 U.S.C. § 2239(a). However, it is clear that compliance with the Order must entail changes to SFC's license in a number of significant respects.<sup>9</sup>

For instance, SFC's license now contains a decommissioning cost estimate of \$4,225,492<sup>10</sup> -- only about one twentieth of its most recent estimate, upon which is based the amount of money the NRC has demanded that SFC set aside for decommissioning.<sup>11</sup> License at 7-6 (Revision dated December 21, 1989)<sup>12</sup>. Second, as

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<sup>9</sup> In contrast, in In re: Three Mile Island Alert, Inc., 771 F.2d 720, 729-30 (3d Cir. 1985), cert. denied sub. nom. Aamodt v. NRC, 475 U.S. 1082, reh. denied, 476 U.S. 1179 (1986), cited by SFC at page 15 of its Answer, the "sole effect" of the order on appeal was to lift a shutdown order, not to change the terms of the license. Id. at 729.

<sup>10</sup> At pages 7-3 through 7-6 of the license, SFC estimates costs of onsite disposal at \$922,830; off-site disposal at \$2,413,080, and treatment of ponds and lagoons at \$889,582.

<sup>11</sup> As acknowledged in the October 15th Order, the full cost of decommissioning is not yet known.

<sup>12</sup> The pages of the license addressing decommissioning financing are included in Attachment B. A copy of the entire license was sent to the Licensing Board for the license renewal proceeding by NRC Staff counsel Steven R. Hom on July 20, 1993.

far as assurances of decommissioning funding go, SFC's license now states that the "New Sequoyah Fuels Corporation"<sup>13</sup> has a "reserve account" "to which charges are accrued on an annual basis during the remaining life of the Sequoyah Facility." Id. According to the license, the "1983 value" used for the current reserve accounts is \$4,011,407. Id. No provision is made for guaranteed funding, other than the noncomittal statement that:

New Sequoyah Fuels Corporation would consider the posting of a bond as a means of assuring the availability of adequate funds at the time of decommissioning if the State of Oklahoma would require this action through regulation and legislation.

Id. Clearly, this provision of the license will be amended if the October 15th order is fully enforced, since the Order will "alter[]" the "binding norm[s] to which [SFC] must comply" by bringing it into compliance with 10 C.F.R. § 40.36. Union of Concerned Scientists v. NRC, 711 F.2d 370, 383 (D.C. Cir. 1983) (holding that NRC effectively amended nuclear power plant licenses when it suspended deadline for compliance with environmental qualification requirements). Thus, contrary to SFC's argument, the instant proceeding involves the amendment of SFC's license, and thus triggers public hearing rights under § 189a of the Atomic Energy Act.

However, even if the Licensing Board does not find this proceeding to involve a license amendment under the Atomic Energy

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<sup>13</sup> "New Sequoyah Fuels Corporation" is the name of SFC's predecessor. Thus, the decommissioning financing plans in SFC's current license do not even name the correct licensee.

Act, NRC regulations at 10 C.F.R. § 2.714(a) permits interested persons to intervene in any type of proceeding under Part 2, without restriction to licensing hearings. For example, public intervenors were admitted to an enforcement hearing in LaCrosse. In that case, the NRC Staff had directed the licensee to show cause why it should not have to install a dewatering system in a nuclear power plant. The licensee submitted an answer to the order, and requested a hearing if the NRC Staff did not agree with its answer. A citizen group also requested a hearing. When the NRC Staff later approved the licensee's answer and withdrew the show cause order, the citizen group nevertheless continued to press for a hearing. The Licensing Board found that, assuming it could demonstrate injury-in-fact to one or more of its members, the citizen group was entitled to a hearing on the issues defined in the original show cause order, i.e., whether a dewatering system should be required.<sup>14</sup>

**B. NACE Has Demonstrated An Interest In This Proceeding Which Will Be Affected by the Outcome.**

Following well-established NRC caselaw, NACE demonstrated its standing to intervene in this case by showing that one of its members, Ed Henshaw, an adjacent neighbor of the SFC site, would be injured if the decommissioning of the SFC site were not ade-

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<sup>14</sup> SFC argues that the Board should not heed this decision because it has not been affirmed by the Appeal Board and thus does not constitute stare decisis. SFC Answer at 21-22, note 10. However, while LaCrosse is not binding on the Licensing Board, it is nevertheless good law which may and should be followed by this Licensing Board.

quately financed and carried out. See, e.g., Houston Lighting and Power Co. (South Texas Project, Units 1 and 2), ALAB-549, 9 NRC 644, 646 (1979); Consumers Power Co. (Palisades Nuclear Plant), LBP-79-20, 10 NRC 108, 112-113 (1979). In support of its Motion, NACE attached Mr. Henshaw's affidavit, which described the location of his property and the potential effects of improper decommissioning on his health and financial interests. This affidavit demonstrates that Mr. Henshaw has "standing in his ... own right" and "authorizes" NACE to help "represent his . . . interests." Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), ALAB-952, 33 NRC 521, 530 (1991).

SFC makes a number of unfounded attacks on Mr. Henshaw's standing to intervene in this proceeding. First, relying on the Commission's position in Bellotti, SFC argues that it is "not possible" that "this proceeding could adversely affect a legally cognizable interest of Mr. Henshaw," because Mr. Henshaw would be no worse off than he is now if the order is not sustained. SFC Answer at 19-22. According to SFC, under the D.C. Circuit's decision in Bellotti, "only those who oppose an NRC enforcement action can assert an interest in the outcome of a proceeding." SFC Answer at 20.

However, as conceded by SFC, the Court did not adopt this characterization of the Commission's position in Bellotti.<sup>15</sup>

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<sup>15</sup> Nor has the Court of Appeals, or the NRC, interpreted recent D.C. Circuit cases conferring broad discretion on the NRC in enforcement matters to completely bar public intervenors from participating in enforcement proceedings. See SFC Answer at 22 and cases cited therein.

Instead, the Court held more narrowly that Massachusetts Attorney General Bellotti had no right to a hearing for purposes of challenging the sufficiency of an enforcement order. 725 F.2d at 1382. Similarly, in Wisconsin Electric Power Co. (Point Beach Nuclear Plant, Unit 1), LBP-80-29, 12 NRC 581 (1980), cited in SFC's Answer at 20-21 as advocating a position "consistent" with the Commission's position in Bellotti, the Licensing Board rejected a request for a hearing on an enforcement order where the hearing request sought more stringent action than was proposed in the enforcement order. In neither Bellotti nor Wisconsin Electric Power Co. had the licensee requested a hearing on the proposed enforcement order; nor was the purpose of the intervention to defend the proposed enforcement order from attack by the licensee. As the dissent noted in Bellotti, these factors are crucial determinants of the public's standing to intervene in an enforcement proceeding:

If there were a chance that the proceeding would overturn the amendment, the public would have standing, since the plant could return to or remain in its pre-amendment unsafe condition. But this is not a possibility unless the licensee seeks a hearing. Unless the licensee protests, any proceeding, as limited by NRC, could only sustain the amendment and thus technically would not adversely affect the public interest because it would make the public more rather than less secure when compared to the pre-amendment situation.

725 F.2d at 1386 (J. Skelly Wright, dissenting). Thus, the instant case presents significantly different circumstances than were considered by the Court or the Commission in the Bellotti case, or by the Licensing Board in the Wisconsin Electric Power



Co. decision. The question at issue here -- whether a member of the public has standing to intervene in a pending enforcement proceeding to defend its interest in sustaining the proposed order -- was reached and decided by the Licensing Board in LaCrosse. 12 NRC at 372, 375 n. 4. Thus, there is no categorical rule that only those who oppose an NRC order have an interest in the proceeding. Under the valid precedent of LaCrosse, once a hearing was initiated by virtue of SFC's and GA's request for one, NACE gained the right to intervene if it could demonstrate its standing to intervene as an "interested person." NACE has standing to intervene in this proceeding because it could be "adversely affected," if the "outcome" of the pending proceeding is to weaken or reverse the proposed changes to SFC's license.<sup>16</sup>

SFC's next line of attack is to attempt to raise the standard for intervention in enforcement proceedings, arguing that since NACE's claimed injury arises from a "lack of regulation" of SFC, standing will be "substantially more difficult" for it to establish. SFC Answer at 27, quoting Lujan v. Defenders of Wildlife, 112 S.Ct. 2130, 2137 (1992). SFC cites not a single NRC case for this proposition; and in fact, the Licensing Board

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<sup>16</sup> SFC also claims that "NACE's purported injury cannot be redressed in this proceeding," because the NRC Staff retains the authority to relax or rescind the Order. SFC Answer at 32. However, once a hearing is commenced, the Staff cedes its authority to modify the Order to the Licensing Board. See, e.g., LaCrosse, 12 NRC at 370-372, Consumers Power Co., (Midland Plant, Units 1 and 2), CLI-73-38, RAI-73-12 at 1082, 1083 (1973). Otherwise, there would be no purpose to appointing an independent adjudicatory body to resolve the dispute between the licensee and the Staff.

rejected just such an argument in LaCrosse, holding that "within the narrowed scope of issues which can be heard in a show-cause proceeding, no more stringent standing requirements [than for licensing proceedings] are imposed." 12 NRC at 374.<sup>17</sup> Moreover, Lujan is inapplicable here. While Lujan concerned a citizen group's efforts to force an agency to take action to protect wildlife, this case involves the circumstance where the government agency has already made a decision to take action, on the ground that it is required to protect public health and safety. Thus, by its own action, the NRC has itself established a causal connection between lack of adequate decommissioning funding and potential harm to the public.

In any event, it is clear that Mr. Henshaw's affidavit, as supplemented by the affidavit of Timothy P. Brown, a hydrogeologist with Linda Lehman & Associates (Attachment C to this pleading)<sup>18</sup>, meets the standard applied by the Supreme Court in Lujan, by showing "actual or imminent injury" that is "fairly traceable" to SFC's failure to adequately decommission the SFC

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<sup>17</sup> In fact, the NRC has espoused a "liberal construction of judicial standing tests" in order to promote meaningful public participation in its proceedings. Portland General Electric Co. (Pebble Springs Nuclear Plant, Units 1 and 2), CLI-76-27, 4 NRC 610, 616 (1976).

<sup>18</sup> The submission of a supplemental affidavit in this reply pleading is appropriate in this case, because SFC has filed a factual challenge to NACE's allegations of standing, forcing a "merits-type evaluation" of NACE's standing claims in "a manner akin to a summary disposition determination." Babcock and Wilcox (Appollo, Pennsylvania Fuel Fabrication Facility), LBP-93-4, 37 NRC 72, 83 (1993).

site, and which is "likely" to be "redressed by a favorable decision." 112 S.Ct. at 2136.

SFC asserts that NACE's "proffered 'injury in fact'" is "hypothetical, conjectural, and highly speculative," because it rests on the "multiple assumptions" that "the rescission or relation of the Order would have to result in lessened funding to SFC, such lessened funding would have to result in a less than adequate decommissioning of the SFC Facility, and such presumed inadequate decommissioning would have to result in migration of contaminated groundwater and surface water that affects Mr. Henshaw's property." SFC Answer at 28-20. However, the Order itself is based on the finding that SFC's current decommissioning funding plans are inadequate to ensure that the site will be "properly" decommissioned. 58 Fed. Reg. at 55,089, Col. 2. Thus, NACE's assertions of potential harm as a result of inadequate decommissioning are hardly "speculative" or "conjectural," but are based on the reasoned determination underlying the NRC's Order.<sup>19</sup>

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<sup>19</sup> SFC also argues that whatever the outcome of the enforcement proceeding, SFC will still be required to comply with the law -- thus, NACE's "hypothetical injuries" are not "fairly traceable to a possible outcome in this proceeding." SFC Answer at 29. This grossly simplistic argument takes no account of the potential practical impacts of the manner in which this case is resolved. If the Board finds that the "law" is fulfilled without the provision of guaranteed decommissioning funding, and if ConverDyn should fail to yield the profits projected by SFC, then as a practical matter, the neighbors of the SFC plant will bear the impacts of living next to a contaminated site, with no prospects that cleanup will be funded. SFC may still have a "legal obligation" to "properly and safely decommission the SFC Facility," but a legal obligation without adequate resources to fund it is worth little to the neighbors who stand to be affected by SFC's contamination.

Moreover, as discussed in detail in Mr. Brown's affidavit, the potential injuries to Mr. Henshaw are "concrete" and "fairly traceable" to the source of contamination at the SFC site.<sup>20</sup> As demonstrated in Attachment 1 to Mr. Brown's affidavit, Mr. Henshaw's property is completely surrounded by the SFC site. Mr. Henshaw's property is susceptible to radioactive and other chemical groundwater contamination via groundwater flow from the beneath the SFC processing buildings, which are approximately a mile away, the wastewater retention ponds, which are approximately a half-mile away, and from SFC's raffinate fields, which completely surround his property. Id. If the groundwater on Mr. Henshaw's property becomes contaminated, it may adversely affect the quality of well water on the property, thereby impacting the health and quality of life for the Henshaw family and future generations.<sup>21</sup> Id., par. 11.

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<sup>20</sup> Unlike the petitioners in Appollo, supra, cited in SFC's Answer at 28 note 13, NACE has demonstrated, through Mr. Brown's affidavit, a "causal link" between the location of Mr. Henshaw's property in relation to the SFC site and potential injury to his interests through contamination as a result of improper decommissioning activities at the SFC site. 37 NRC at 84.

<sup>21</sup> Mr. Henshaw's affidavit also claimed that he would suffer "social and economic" impacts of "living next to a de facto nuclear waste dump." Par. 3. SFC claims that economic interests such as depressed property values are not within the "zone of interest" protected by the Atomic Energy Act. SFC Answer at 30, n. 14, citing Houston Lighting and Power Co. (Allens Creek Nuclear Generating Station, Unit 1), ALAB-582, 11 NRC 239, 242 (1980); Public Service Co. of New Hampshire (Seabrook Station, Unit 2), CLI-84-6, 19 NRC 975, 978 (1984); Detroit Edison Co. (Enrico Fermi Atomic Power Plant, Unit No. 2), ALAB-470, 7 NRC 473, 474-76 (1978).

These cases do not preclude consideration of Mr. Henshaw's economic interests in assurances of adequate decommissioning funding for the SFC site. Public Service Co. of New Hampshire and Detroit Edison Co. precluded standing based on tax-

SFC claims that "there is no indication" that groundwater beneath SFC's processing buildings and waste ponds could contaminate Mr. Henshaw's groundwater, because the groundwater flows in a "generally westward direction," away from Mr. Henshaw's property. SFC Answer at 31. This argument is based neither on qualified expert opinion nor on an adequate factual foundation.<sup>22</sup>

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(continued)

payer or ratepayer status -- claims that are irrelevant here. Houston Lighting and Power held that "purely" economic interests, such as the property interest asserted by the petitioner in that case, cannot confer standing by themselves. However, it did not completely forbid such considerations. In fact, the NRC's regulations themselves require the Licensing Board to weigh the "nature and extent of the petitioner's property, financial, or other interest in the proceeding." 10 C.F.R. § 2.714(d). Mr. Henshaw's averred interests included both economic and health and safety concerns, and thus may be considered together as evidence of his standing. Henshaw affidavit, par. 3.

22 Moreover, SFC cannot rely on the June 28, 1993 decision by a hearing examiner of the Oklahoma Water Resources Board ("OWRB") finding that NACE lacked standing to challenge a permit for a stormwater retention pond on the SFC site. SFC Answer at 31, note 15. First, the determination by a state hearing examiner regarding the potential migration of nitrates from a single retention pond on the SFC site has no res judicata effect on this Licensing Board regarding the potential migration of radioactive contaminants from the entire SFC property.

Second, the hearing examiner's decision is neither final nor valid, because it was never submitted as a "proposed" order for final approval by the Water Resources Board, as required by Oklahoma Administrative code 785:4-9-2(a). This is because the within 3 days after the decision was rendered, regulatory authority over the case was transferred to the Department of Environmental Quality by operation of title 27A, Section 6 of the Oklahoma Statutes (1992). The DEQ has not responded to NACE's request for reconsideration of the hearing examiner's order.

Finally, the process by which the hearing examiner made his decision was arbitrary and unfair. SFC first filed its objection to NACE's May 18, 1993, request to participate in the OWRB proceeding, along with an affidavit attacking SFC's standing, at 4:15 p.m. on Friday, June 25, 1993. On Monday, June 28, 1993, the Board held a hearing and orally granted SFC's opposition. Thus, NACE was not given the opportunity

First, SFC's arguments regarding the behavior of groundwater in the area of the SFC site are based on the affidavit of John S. Dietrich, Vice President, Technical Services of Sequoyah Fuels Corporation. Mr. Dietrich neither asserts any technical experience in the field of hydrogeology, nor does he attach a resume to his affidavit showing his technical qualifications. Thus, Mr. Dietrich is not qualified to attest to any professional opinion regarding the behavior of groundwater in the area of the SFC site, but only to the fact that his company recently sponsored some limited studies which make certain statements regarding ground and surface water behavior.

Second, SFC lacks an adequate technical basis for its assertion that Mr. Henshaw's concern that contaminated groundwater and surface water will migrate onto his property "defies reality." SFC Answer at 30. As discussed in Mr. Brown's affidavit, SFC has not performed sufficient areal or vertical groundwater studies to identify all of the potential directions of groundwater flow beneath the SFC site; and the information that is available indicates that the hydrogeology of the area is quite complex, and that therefore groundwater is likely to flow in more than one direction. Even in the unlikely event that the groundwater flows in a solely westward direction, Mr. Henshaw's property lies to

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(continued)

to submit expert affidavits of its own regarding its standing to participate in the proceeding.

the west of some of SFC's raffinate fields. Although data regarding groundwater quality in the raffinate fields are limited, SFC has reported some gross alpha and uranium measurements that are above proposed EPA limits for radioactive substances, as well as measurements of nonradioactive contaminants such as nitrates and cadmium that exceed EPA drinking water standards. Brown Affidavit, par. 10. Thus, Mr. Henshaw's property lies in the flowpath of contaminated groundwater from SFC's raffinate fields.

Moreover, as discussed in Mr. Brown's Affidavit at par. 12, air transport is another potential source of contamination of Mr. Henshaw's property, as large quantities of soil at the SFC site are contaminated with uranium and other pollutants. Soil that is not properly contained may be blown by the wind and become airborne, travelling the short distance to Mr. Henshaw's property and beyond. Improper decommissioning activities could also stir up contaminated soils, allowing the wind to carry them beyond the borders of the site to Mr. Henshaw's property. Id.

Finally, as demonstrated by a recent incident at SFC, inadequate security, allowing human transport of contaminated materials, is another risk posed by the improper decommissioning of the SFC site. NACE has just learned that on December 14, 1993, SFC filed a Preliminary Notification of Event or Unusual Occurrence with the NRC (PNO-IV-93-038), which reports that three contaminated two-way radios belonging to SFC were confiscated during an offsite arrest on the night/morning of December 11-12,

1993. A copy of PNO-IV-93-038 is included in this pleading as Attachment D. SFC reported that "Although alpha and beta contamination levels identified on two of the three radios were below the release limits established by the licensee, a small area on one of the radios had fixed beta contamination levels of 20,000 dpm/100 square centimeters, which is above SFC's release level of 15,000 dpm/100 square centimeters."<sup>23</sup> Id. at 1. If inadequate decommissioning funding is provided for the SFC site, a lack of resources may affect SFC's ability to fund adequate security and survey checkpoint measures, thereby increasing the risk of incidents such as the one described above.

Accordingly, NACE has demonstrated both that it is entitled to intervene in this proceeding under the Atomic Energy Act and NRC caselaw and regulations, and that it has standing to intervene.<sup>24</sup> Thus, the Licensing Board should admit NACE to this proceeding as a matter of right.

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<sup>23</sup> The need for stringent measures is demonstrated by a pattern of such incidents throughout the past several years. See, e.g., NRC Inspection Report 93-32 (January 29, 1993) (transfer of three barrels uranium to unlicensed firm offsite); Inspection Report 92-27 (November 23, 1992) (leakage of radioactive material found on transport vehicle); Inspection Report 91-14 (February 5, 1992) (leakage of uranium-contaminated slurry from tank truck during shipment to New Mexico).

<sup>24</sup> SFC makes the unfounded argument that NACE should also have submitted a contention that satisfies the Commission's criteria in 10 C.F.R. § 2.714(d)(2). However, § 2.714(d)(2) says nothing about the timing of submission of contentions, but rather provides criteria for admissibility of contentions in addition to § 2.714(b). The timing of submission of contentions is governed by § 2.714(a)(3), which allows filing of contentions as of right up to fifteen days before the special prehearing conference or first prehearing conference. Thus, NACE was not required to submit contentions at the time of its petition to intervene. As the Staff contends, NACE's motion to intervene should be accepted "subject to the submission of a valid contention at the appropriate time." NRC



**III. Even if the Board Finds that NACE Does Not Have a Right to Intervene in This Proceeding, NACE Satisfies the Criteria for Discretionary Intervention.**

Assuming for purposes of argument that NACE is not entitled to intervene in this proceeding as of right, the Licensing Board nevertheless should exercise its discretion to allow NACE to participate in this proceeding. As noted by the Commission in Portland General Electric Co. supra, 4 NRC at 616, discretionary intervention is not only permitted, but is encouraged so that agencies may "maximize productive public participation in their proceedings." Id., citing Office of Communication of United Church of Christ v. FCC, 359 F.2d 994, 1005-1006 (D.C. Cir. 1966).

The importance of public participation in this case was recently noted by NRC Chairman Ivan Selin in a briefing on the status of the Site Decommissioning Management Plan sites, including SFC. In that briefing, Decommissioning Branch Chief John Austin had pointed out that the NRC has yet to promulgate technical standards for decommissioning of nuclear facilities, and that the Sequoyah Fuels case

reinforces the link between remediation criteria and financial assurance. One cannot set a level of funding that would be required for decommissioning with confidence if one does not know what the remediation standard is going to be. There's a direct link and it can involve a factor of ten or 100 in what the decommissioning cost could be, depending on the specific remediation standard.

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(continued)

Staff's Response at 7.

Briefing on Site Decommissioning Management Plan, Tr. at 29

(November 8, 1993)<sup>25</sup>. Chairman Selin responded that:

In looking at places where sort of a judgment as to what's the best outcome given that the finances don't seem to be consistent with our standards, those are prima facie places where you want the affected public to have a chance to make a statement. It would not be appropriate for bureaucrats in Washington to be making these tradeoffs at some site without a strong input from the people who are involved. If we're following our standards, the standards have been put out in a rule, they've been commented on, that's one situation. But in these situations where they're really judgment and value calls, the affected parties have to be strongly involved on each issue.

Tr. at 32 (emphasis added). Thus, the Licensing Board effectively has a mandate from the Commission to allow NACE to participate in this proceeding.

The pendency of this proceeding was also a factor in the Licensing Board's recent decision to unconditionally grant SFC's motion to withdraw its license renewal application. LBP-93-25, Slip op. at 29. The Board refused the State of Oklahoma's request to place conditions on the withdrawal relevant to financial assurances for completion of decommissioning, ruling that "[s]ince this matter will be considered in a subsequent adjudicative proceeding, the complex details and extent of decommissioning financing will be more appropriately reviewed and resolved in the context of that proceeding." Id. NACE had also requested the opportunity to litigate the adequacy of decommissioning funding in the context of the license renewal proceeding, or in the

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<sup>25</sup> The relevant pages of the transcript are included as Attachment E to this pleading.

alternative to seek conditions on the withdrawal relative to decommissioning funding. Thus, it is appropriate to allow NACE to intervene in this proceeding for the purpose of advocating the public interest in assuring that the October 15th Order is carried out.

Other considerations, as set forth in the Pebble Springs decision, also weigh heavily in favor of admitting NACE as an intervenor in this proceeding. First, as discussed above, NACE has retained experts who are very familiar with decommissioning funding issues at the SFC site, and therefore may be expected to contribute to the development of a sound record. Second, NACE has established strong health and property interests in the proceeding through the affidavit of Mr. Henshaw. Finally, as discussed in NACE's Motion, if the terms of the October 15th Order are not fulfilled, decommissioning of the SFC site may be delayed or conducted improperly, thus putting NACE's members and the rest of the surrounding community at risk from contamination. Thus, NACE has demonstrated a strong interest in the outcome of this proceeding.

Moreover, as discussed above, there are no other available means for protecting NACE's interests in this proceeding; and NACE's interests cannot be represented adequately by the NRC Staff, which is the only other party to the hearing besides SFC and GA. Finally, NACE's participation will only incrementally delay the proceeding, and it will not broaden the proceeding. Furthermore, any minimal delay caused by NACE's participation is

more than compensated for by the benefits of permitting the public to have a say in this proceeding, which stands to have such a significant effect on public health and safety.

Accordingly, all of the above factors weigh heavily in favor of admitting NACE as a discretionary intervenor to this proceeding.

CONCLUSION

For the foregoing reasons, the Licensing Board should admit NACE as an intervenor to the hearing on the NRC's October 15th order regarding decommissioning funding for the SFC facility.

Respectfully submitted,



Diane Curran  
HARMON, CURRAN, GALLAGHER  
& SPIELBERG  
6935 Laurel Avenue, Suite 204  
Takoma Park, MD 20912  
(301) 270-5518

December 30, 1993

CERTIFICATE OF SERVICE

I certify that on December 30, 1993, copies of the foregoing  
NATIVE AMERICANS FOR A CLEAN ENVIRONMENT'S REPLY TO SEQUOYAH  
FUELS CORPORATION'S ANSWER IN OPPOSITION TO NACE'S MOTION TO  
INTERVENE were served by first-class mail and/or by FAX on the  
following:

Office of Commission Appellate Adjudication  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

OFFICE OF SECRETARY  
DOCKETING & SERVICE  
BRANCH

\*Administrative Judge James P. Gleason  
Atomic Safety and Licensing Board  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

\*Administrative Judge G. Paul Bollwerk  
Atomic Safety and Licensing Board  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

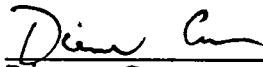
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**ARJUN MAKHIJANI**

*Education:*

Ph.D. (Engineering - dissertation area: controlled nuclear fusion), University of California, Berkeley, 1972.

M.S. (Electrical Engineering - thesis area: ionospheric wave propagation), Washington State University, Pullman, Washington, 1967.

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*Current Positions:*

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Senior Fellow, Systems Research Institute, Pune, India.

U.S. EPA Science Advisory Board, Radiation Advisory Committee

*Professional Societies:*

American Association for the Advancement of Science

Institute of Electrical and Electronics Engineers

American Geophysical Union

American Institute of Physics

*Awards:*

The John Bartlow Martin Award for Public Interest Magazine Journalism of the Medill School of Journalism, Northwestern University, 1989, with Robert Alvarez.



*Consulting Experience, 1975-Present*

Consultant on a wide variety of issues relating to technical and economic analyses of portions of the nuclear fuel cycle, alternative energy sources, electric utility rates and investment planning, energy conservation, analysis of energy use in agriculture, energy policy for the U.S., and energy policy for the Third World.

Among the organizations and institutions to which I am or have been a consultant are:

Congressional Office of Technology Assessment  
Native Americans for a Clean Environment  
Lawrence Berkeley Laboratory  
Tennessee Valley Authority  
International Physicians for the Prevention of Nuclear War  
Lower Colorado River Authority  
Ford Foundation  
United Nations University  
Federation of Rocky Mountain States  
Edison Electric Institute  
Food and Agriculture Organization of the United Nations  
International Labour Office of the United Nations  
United Nations Environment Programme  
United Nations Center on Transnational Corporations  
Environmental Policy Institute  
Economic and Social Commission for Asia and the Pacific  
United Nations Development Programme  
National Association of Atomic Veterans  
The law firm of Waite, Schneider, Bayless and Chesley

As Senior Engineer at the Institute, and as a consultant prior to that, I authored or co-authored studies on nuclear fuel cycle-related issues, including weapons production, testing and nuclear waste, for over a decade. As the Director of IEER's Atmosphere Protection Project, I have co-authored four studies on ozone layer protection issues. I am also the principal author of the first study ever done on energy conservation potential in the U.S. economy.

Languages: English, French, Hindi, Sindhi, and Marathi.

## MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 39, 40 and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below: to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee		
1. Sequoyah Fuels Corporation	3. License number	SUB-1010, Amendment No. 19
2. Sequoyah Facility I-40 and Highway 10 Gore, Oklahoma 74435	4. Expiration date	September 30, 1990
	5. Docket or Reference No	40-8027
6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
Source	Any form	20 million MTU
9. Authorized use: For use in accordance with the statements, representations, and conditions contained in Chapters 1 through 8 of the license renewal application dated August 23, 1985; supplements dated January 24, 1985; August 20, September 3, September 26, November 13, December 9, and December 19, 1986; February 26, May 11, June 4, September 15 (submitted by letter dated September 17, 1987), September 25 (submitted by letter dated September 29, 1987), September 29, November 6 (submitted by letter dated November 23, 1987), November 6 (submitted by letter dated September 21, 1988), November 30, December 3, and December 7, 1987 (submitted by letter dated December 28, 1987); March 4, March 14, March 31, July 12, July 18, and October 18, 1988; March 2, March 3, April 11, May 10, August 20, September 11, October 20, November 7, December 11; and December 21, 1989; February 12, May 22, June 15, and September 7, 1990; February 27, March 22, April 8, and June 3, 1991; February 28, 1992 (page 5-8), June 19, and September 24, 1992; and January 27, 1993; two letters dated December 19, 1985, and letters dated March 25, and May 22, 1987.		
10. Authorized place of use: The licensee's existing facilities at Gore, Oklahoma.		
11. Deleted.		
12. The licensee shall submit for NRC review and approval the plan and criteria for decommissioning Pond No. 2 upon the completion of sludge removal from Pond No. 2.		
13. The licensee shall maintain spare pondage having capacity equal to or greater than Pond No. 5.		
14. At the end of plant life, the licensee shall decontaminate and decommission the facility so that it can be released for unrestricted use.		



## CHAPTER 7. DECOMMISSIONING PLAN

### 7.1 Introduction

The New Sequoyah Fuels Corporation Sequoyah Facility is expected to continue operation for many years, possibly until the year 2000. Decommissioning of the facility and termination of its license requires certain decontamination and disposal efforts. Contaminated equipment and materials will be buried onsite only after receiving specific prior authorization from the Nuclear Regulatory Commission.

The engineering estimates for decommissioning the Sequoyah Facility are based upon radiological survey data provided by Kerr-McGee and an onsite inspection by ATCOR, (since acquired by Chem Nuclear which has merged with Waste Management, Inc.). The estimates are for facility decontamination with disposal of radioactive materials both on-site and off-site.

The estimates assume burial of the bulk of the plant's processing equipment, simple cleaning methods for walls and overhead structures, surface scaling of process area flooring, and complete floor removal in only limited areas. While these decisions have been made at this point without benefit of a complete radiological survey and testing of decontamination techniques, they are based upon ATCOR's qualitative analysis of the data and experience obtained in previous decontamination projects.

### 7.2 Engineering Estimates

#### 7.2.1 Assumptions and Conditions

- a) Release criteria for the facility will be in conformance with the U.S. Nuclear Regulatory Commission "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of License for by-product, Source, or Special Nuclear Material".

Maximum fixed 15,000 dpm/100 cm<sup>2</sup>

Average fixed 5,000 dpm/100 cm<sup>2</sup>

Maximum loose 1,000 dpm/100 cm<sup>2</sup>

- b) Building overheads and walls can be decontaminated and remain in place.
- c) Certain floor areas must be completely removed and, in some areas, dirt sub-floors excavated.
- d) Estimated volume of contaminated waste material to be removed is 295,000 cubic feet. This volume has been determined through a review of the facility drawings and visual inspection of the facility.
- e) Certain areas exterior to the building structure will require surface scraping and disposal of the radioactive residue.
- f) Any scrap pile of discarded contaminated equipment is presumed to be above release levels.
- g) Contaminated in-ground drains, pipes and sumps are presumed to be above release limits and will be removed as contaminated waste.

#### 7.2.2 Procedures

- a) A detailed radiological survey of the facility must be performed and a general decommissioning plan will be developed.
- b) Remove all recoverable uranium, including yellowcake and  $UF_6$  from the process equipment and storage locations.
- c) Remove all clean material and equipment from the site or place in separate storage area.
- d) Disassemble, decontaminate when economically feasible, and dispose of contaminated process equipment.
- e) Decontaminate building structures, walls and overhead surfaces.

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- f) Decontaminate or remove floor areas as necessary.
- g) Remove floor drains, pipes, and sumps.
- h) Dispose of scrap pile. This will require consolidation and packaging for appropriate burial.
- i) Decontaminate external areas and package contaminated material for appropriate burial.
- j) Upon the completion of the individual decontamination efforts, informal surveys will be taken to ensure that the areas meet release criteria. At the completion of the total decontamination effort, a formal survey will be taken utilizing the grids laid out initially. Since proper controls are maintained during the decontamination effort, only minor decontamination work will be necessary at this point. This final radiological survey will be submitted to the Nuclear Regulatory Commission for release from the facility's operating license.

### 7.3 Estimated Cost of Decommissioning

Additional assumptions for the cost of the decontamination job are noted below.

- a) Based upon 1978 costs with overhead expenses and profit compatible with the ATCOR pricing policy.
- b) ATCOR employees are used for management, supervision, and health physics services.
- c) Local labor working under ATCOR supervision acts as the decontamination technicians for this work.

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- d) For purposes of off-site burial estimates, the commercial burial site of Chem-Nuclear in Barnwell, South Carolina has been selected.

Estimate #1 - On-Site Disposal (Ponds and Lagoons not included)

Labor	\$704,125.00
Living and Travel Expenses	109,570.00
Subcontractors, Materials & Supplies	<u>109,135.00</u>
	\$922,830.00

Estimate #2 - Off-Site Disposal (Ponds and Lagoons not included)

Labor	\$738,290.00
Living and Travel Expenses	115,040.00
Transportation	355,000.00
Disposal	890,100.00
Subcontractors, Materials & Supplies	<u>314,650.00</u>
	\$2,413,080.00

7.4 Treatment of Ponds and Lagoons

Estimates are provided for decommissioning of the liquid and sludge storage facilities.

Assumptions are as follows:

1. A procedure for disposal of both raffinate sludge and fluoride sludge has been approved by the NRC, and all sludge processing is up to date by the end of the plant life.
2. The raffinate liquid and/or sludge storage facilities remaining at the end of plant life will be lined with synthetic materials.

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3. All fluoride sludge ponds will be emptied and/or cleaned to release levels.
4. The emergency holding basin will be drained and the bottom sediments will be removed and treated similar to raffinate sludge.
5. The sewage lagoon will be drained and the sludge will be processed in a manner similar to the raffinate sludge.
6. After removal of all liquids and sludges from the lined ponds, the liners will be folded to the center of the pond and covered with a minimum of four (4) feet of earth fill.
7. Any contaminated areas of the combination stream drainage ditch will be decontaminated to release levels by removal of contaminated soils to the sludge disposal area.

Cost Estimate:

Costs for liquid and sludge processing will be part of operating costs and are not included as decommissioning costs.

Earthmoving and equipment removal work to return all raffinate ponds, fluoride sludge ponds, holding basins, sewage lagoons, and drainage ditches to near original land conditions are estimated as follows:

1. Raffinate Pond 3 west	\$ 115,223
2. Raffinate Pond 3 east	115,233
3. Raffinate Pond 4	115,233
4. Raffinate Pond 2	129,765
5. Raffinate Clarifier A	72,000
6. Fluoride Sludge Process Ponds	62,084
7. Fluoride Sludge Holding Basin	22,818

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8. Fluoride Sludge Process Ponds	62,084
9. Fluoride Sludge Holding Basin	22,818
10. Emergency Holding Basin	15,000
11. Sewage Lagoon	9,000
12. Drainage Ditch	2,800

Total Estimated Cost for Ponds and Lagoons      \$ 889,582

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#### 7.5 Financial Arrangements

The New Sequoyah Fuels Corporation has established a reserve account to which charges are accrued on an annual basis during the remaining life of the Sequoyah Facility. Since the value of 1978 dollars will vary in subsequent years, the annual charge to the reserve will be adjusted by use of a pricing index. The 1983 value used for current reserve accounts is \$4,011,407 which has been adjusted for the additional costs for ponds and lagoons. The reserve account activity will be audited annually as part of the routine annual audit. A special audit report on the reserve account activity will be available at the Sequoyah Facility for review by the NRC I&E personnel.

New Sequoyah Fuels Corporation would consider the posting of a bond as a means of assuring the availability of adequate funds at the time of decommissioning if the State of Oklahoma would require this action through regulation and legislation.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
ATOMIC SAFETY AND LICENSING BOARD

In the matter of

SEQUOYAH FUELS CORPORATION  
and GENERAL ATOMICS

(Gore, Oklahoma Site  
Decontamination and  
Decommissioning Funding)

Docket No. 40-8027-EA

Source Material License  
No. SUB-1010

AFFIDAVIT OF TIMOTHY P. BROWN

December 27, 1993

I, Timothy P. Brown, depose and say:

1. I am a professional hydrogeologist employed by L. Lehman & Associates; 1103 W. Burnsville Parkway, Suite 209, Burnsville MN, 55337. A statement of my professional qualifications is attached.

2. I have reviewed the December 3rd, 1993 Affidavit of John S. Dietrich, which is attached to Sequoyah Fuels Corporation's Answer in Opposition to NACE's Motion to Intervene (December 6, 1993).

3. The purpose of this affidavit is to discuss the reasons why I believe that Ed Henshaw's property may become contaminated if decommissioning of the Sequoyah Fuels facility is not carried out properly. I will also address the reasons why I believe there is an inadequate basis for Mr. Dietrich's assertions regarding the potential for contamination of the groundwater on Mr. Henshaw's property. My affidavit includes Attachment 1, which is a schematic drawing showing the location of Mr. Henshaw's property in relation to the SFC site and some of the important hydrologic features in the area.

4. In Paragraph 7 of his affidavit, Mr. Dietrich refers to SFC's 1991 Facility Environmental Investigation (FEI), the Addendum to the FEI of 1992 and Questions for Clarification -- SFC Environmental Assessment also dated 1992. I have thoroughly reviewed these documents. I have also reviewed other pertinent reports and studies

relating to environmental quality at Sequoyah Fuels Corporation's Gore, Oklahoma site including:

- 1) Kerr-McGee Corporation, Monitor Locations Sequoyah Facility, Site Map and well descriptions # 110-C-1021, Aug. 8, 1985.
- 2) Sequoyah Fuels Corporation, Ammonium Nitrate Fertilizer Program, 1989 Completion Report, April, 1990.
- 3) Sequoyah Fuels Corporation, Ammonium Nitrate Fertilizer Program, 1990 Completion Report, April, 1991.
- 4) Sequoyah Fuels Corporation, Applicant's Environmental Report, Revision 1, for Sequoyah Facility, January, 1992.
- 5) Sequoyah Fuels Corporation, Sequoyah Fuels Corporation Action Plan, January, 1992.
- 6) Sequoyah Fuels Corporation, Sequoyah Fuels Corporation Groundwater Monitoring Plan, March, 1992.
- 7) Sequoyah Fuels Corporation, Partial Response to NRC Inquiry Regarding Environmental Assessment, September, 1992.
- 8) Sequoyah Fuels Corporation, Environmental Program for Sequoyah Facility, September, 1992.
- 9) Sequoyah Fuels Corporation, Preliminary Plan for Decommissioning (PPCD), February, 1993.
- 10) B.B. Tucker, R.L. Westerman, and G.V. Johnson, Sequoyah Fuels Corporation Fertilizer Program Report, Oklahoma State University, 1988.

5. The soil and groundwater at the SFC site are contaminated with radioactive chemicals such as uranium, thorium and radium, and nonradioactive chemicals such as nitrates, fluoride, arsenic and heavy metals. These contaminants occur at various locations on the site, but appear to be concentrated beneath the process buildings, and also beneath the nitrate settling ponds that lie to the south and west of the process buildings.

6. In paragraph 8 of his affidavit, Mr. Dietrich states that SFC's waste ponds are about one-half mile northwest of Mr. Henshaw's property. According to Mr. Dietrich, the groundwater under the waste ponds flows in a generally westward direction, "away from Mr. Henshaw's property". Thus, he concludes in Paragraph 9 that "there is no indication of any groundwater flow path which would allow flow of groundwater from beneath SFC's industrial site and associated pond areas to reach Mr. Henshaw's property".

7. Mr. Dietrich's conclusion is based on measurements of the groundwater's upper surface in the immediate vicinity of the waste ponds, as described in Paragraph 8 of his affidavit. However, these measurements are inadequate to support Mr. Dietrich's conclusion, because they represent: a) too small a portion of the areal groundwater potentiometric surface, and b) not enough of the vertical extent of groundwater, to reliably identify all flow paths of the groundwater in the area.

- a) Inadequate measurement of areal groundwater flow. SFC has measured the areal potentiometric surface elevations in the processing area and directly under



the impoundments to the south. These two areas represent a small portion of the larger flow field at the SFC Gore site and are insufficient to characterize, with reasonable confidence, groundwater flow which could affect Mr. Henshaw's property. Figures 48 through 54 of the FEI (Attachments 2-8 to this Affidavit), which show geologic cross-sections of the area, reveal a complex and unpredictable pattern of hydrologic unit relationships. There exist many juxtaposed rock units which exhibit a wide range of hydrologic properties. As water flows through these dissimilar rocks, flow direction may bend and twist as the pressure field accommodates sharp changes in conductivity and porosity.

- b) In addition, several site maps, including Kerr-McGee Corporation's Site Plan and Area Map #110-C-151, Rev. 5, (Attachment 9 to this Affidavit), show a fault zone running from roughly the old Carlisle School, due east of the processing area, through Mr. Henshaw's property south of the site. This fault zone contains groundwater and likely plays a significant role in the area hydrodynamics. It may act as a fast pathway or as a barrier to groundwater flow. Data collection and analysis has not been performed to determine the impact of the fault, as SFC's efforts have concentrated on the immediate area of the processing buildings and waste ponds.
- c) Accordingly, given the very small area examined by SFC, and given the complexity of the geology at the SFC site including the presence of a fault zone, to characterize the groundwater flow as "westward" for the entire area is a gross over-simplification which potentially misses localized flow patterns. The potentiometric surface should be measured over a continuous area encompassing at least the SFC and Henshaw properties, with sufficient resolution such that the flow field can be reliably mapped.
- d) Inadequate measurement of vertical groundwater flow. Another reason why the data cited by Mr. Dietrich are inadequate to support his conclusion is that they relate only to the upper groundwater zones. In fact, Mr. Dietrich's affidavit fails entirely to address the possibility that deeper levels of groundwater may flow toward Mr. Henshaw's property. It is not uncommon for different levels of a groundwater flow system to have different directions of flow. Deeper layers of groundwater may be confined and nearly isolated so that entirely different flow directions are achieved. Contaminants may then seep into deeper zones through slow leakage or diffusion and/or through conduits created by the drilling of deep wells. Such conduits have been created by the drilling of seven wells to depths below 100 feet at the SFC site, including a 400 feet deep well in the center of the processing area which is associated with an early proposed injection disposal system (see Attachment 1). Some of the deep wells were "plugged" in 1987 but were in place for many years. These wells are likely to have previously functioned as fast pathways for contaminant transport from the upper levels of groundwater to depths well below SFC's current monitoring network. Depending on the effectiveness of the plugging and sealing of the wells, which to my knowledge has not been evaluated, they may continue to act as conduits from upper to lower groundwater layers. Once they reach lower levels, contaminants may be transported in a direction contrary to the flow direction that is apparent

based on the potentiometric surface map. In this case, none of SFC's reports provide any data for depths below 40-50 feet; thus SFC has no basis for assuming that contaminated groundwater in deeper zones does not flow toward Mr. Henshaw's property.

8. Mr. Dietrich focuses in his affidavit on the potential for groundwater contamination from the nearest source to Mr. Henshaw's property, the waste ponds. However, the process buildings, while they are further away from Mr. Henshaw's property, are also a potentially significant source of contamination with very high concentrations of uranium, fluoride, nitrate, arsenic and barium (see: Figures 77 and 97 of the FEI, Attachment 10-13). If unidentified flow paths exist in the groundwater, either in the upper or deep zones, contaminated groundwater beneath these buildings may eventually reach and contaminate Mr. Henshaw's property. To my knowledge SFC has not performed any surveys at depths below 50 feet beneath these buildings to determine whether these contaminants exist at or below this depth.

9. Accordingly, I conclude that, with respect to the potential for groundwater contamination of Mr. Henshaw's property by radioactive and other hazardous chemicals beneath the SFC process buildings and waste ponds, SFC has not provided enough data to reliably assert that groundwater at some depth does not flow toward Mr. Henshaw's property. If anything, the available data suggests that groundwater flows in the area are variable and complex, are not reliably characterized as "westward" only, and may flow in other directions as well. The complex stratigraphic relationships as well as the presence of a faulted zone in the area between the process buildings and Mr. Henshaw's property should be expected to have significant impacts on the area groundwater flow. These important hydrologic features have not been adequately described, nor have their effects on local groundwater flow been addressed. Accurate characterization, as well as reliable prediction of the hydrodynamic system behavior around the SFC facility, will require the collection and analysis of considerably more data than has been accomplished.

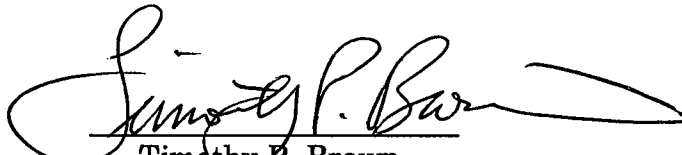
10. Mr. Henshaw's property may also be susceptible to contamination from SFC's raffinate spreading fields which adjoin his property on several sides (see Attachment 1). Raffinate is a highly concentrated nitrate solution containing heavy metals including arsenic, barium, mercury, lead, selenium, uranium, and others. SFC's Fertilizer Completion Reports have indicated that levels of nitrates and cadmium have at times been above the Environmental Protection Agency's drinking water limits, and that levels of gross alpha emission and uranium have been above the currently proposed EPA limits for radioactive substances (see: Sequoyah Fuels Corporation, Ammonium Nitrate Fertilizer Program, 1989 Completion Report, April, 1990). Data collected relating to groundwater quality in the raffinate spreading areas are extremely limited, so that the effects of SFC's raffinate spreading program on groundwater quality have not been fully determined. Several of these fields are eastward of Mr. Henshaw's property. Thus Mr. Henshaw's property is at risk of contamination whatever direction groundwater flows in the area.

11. If the groundwater on Mr. Henshaw's property becomes contaminated, it may adversely affect the quality of well water on the property, thereby impacting the health and quality of life for the Henshaw family and future generations.

12. Airborne transport of contaminants from the SFC site is another potential source of contamination of Mr. Henshaw's property. Large quantities of soil at the site are contaminated with uranium and other pollutants. Soil that is not properly contained may be blown by the wind and become airborne, traveling the short distance to Mr. Henshaw's property and beyond. Improper decommissioning activities could also stir up contaminated soil, allowing the wind to carry them beyond the borders of the site.

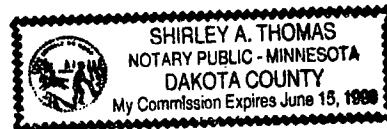
13. The statements of fact in this Affidavit are true and correct to the best of my knowledge, information and belief.

Date: 12/27/93

  
Timothy P. Brown

12/27/93





**TIMOTHY P. BROWN** Hydrogeologist  
L. LEHMAN & ASSOCIATES, INC.  
1103 West Burnsville Parkway, Suite 209  
Burnsville, Minnesota 55337  
(612) 894-0357

## **EDUCATIONAL BACKGROUND:**

M.S. Civil Engineering, 1992 - University of Minnesota  
B.S. Geo-Engineering, 1990 - University of Minnesota  
B.S. Geophysics, 1990 - University of Minnesota

## **WORK HISTORY:**

Staff hydrogeologist  
L. Lehman & Associates, Inc.; 1991 - Present

Research Assistant  
University of Minnesota, 1990 - 1991

## **EXPERIENCE:**

### Ground Water Modeling

- Masters thesis quantifying uncertainty in ground water model output utilizing O.D.L. Strack's analytic element model.
- Developing and reviewing models for the State of Nevada in the international flow and transport model validation effort for nuclear waste repository performance codes (INTRAVAL).
- Implementation of VTOUGH multi-phase unsaturated zone flow model for test cases relating to the proposed Yucca Mountain high-level radioactive waste project utilizing the Nevada Cray Supercomputer.

### Hydrologic Investigations

- Analysis of VOC contaminant trends at the Flying Cloud Landfill.
- Study of fracture flow effects on unsaturated porous media ground water flow patterns at the Nevada test site.
- Analysis of water level trends and cycles at Devil's Hole National Monument using an in-house linear regression cosine curve fitting program (FIT.M).

### Technical Program Management

- Principal investigator for firm's project at the Sequoyah Fuels nuclear facility in Gore, Oklahoma. Coordinated research and prepared legal briefings and reports for the client.
- Coordinated research and hydrologic study for the client's lawsuit involving the DOE's Mound Facility.

Resume: Timothy P. Brown  
continued

**PROFESSIONAL ACTIVITIES:**

Certifications

Registered Engineer In Training (EIT), State of Minnesota

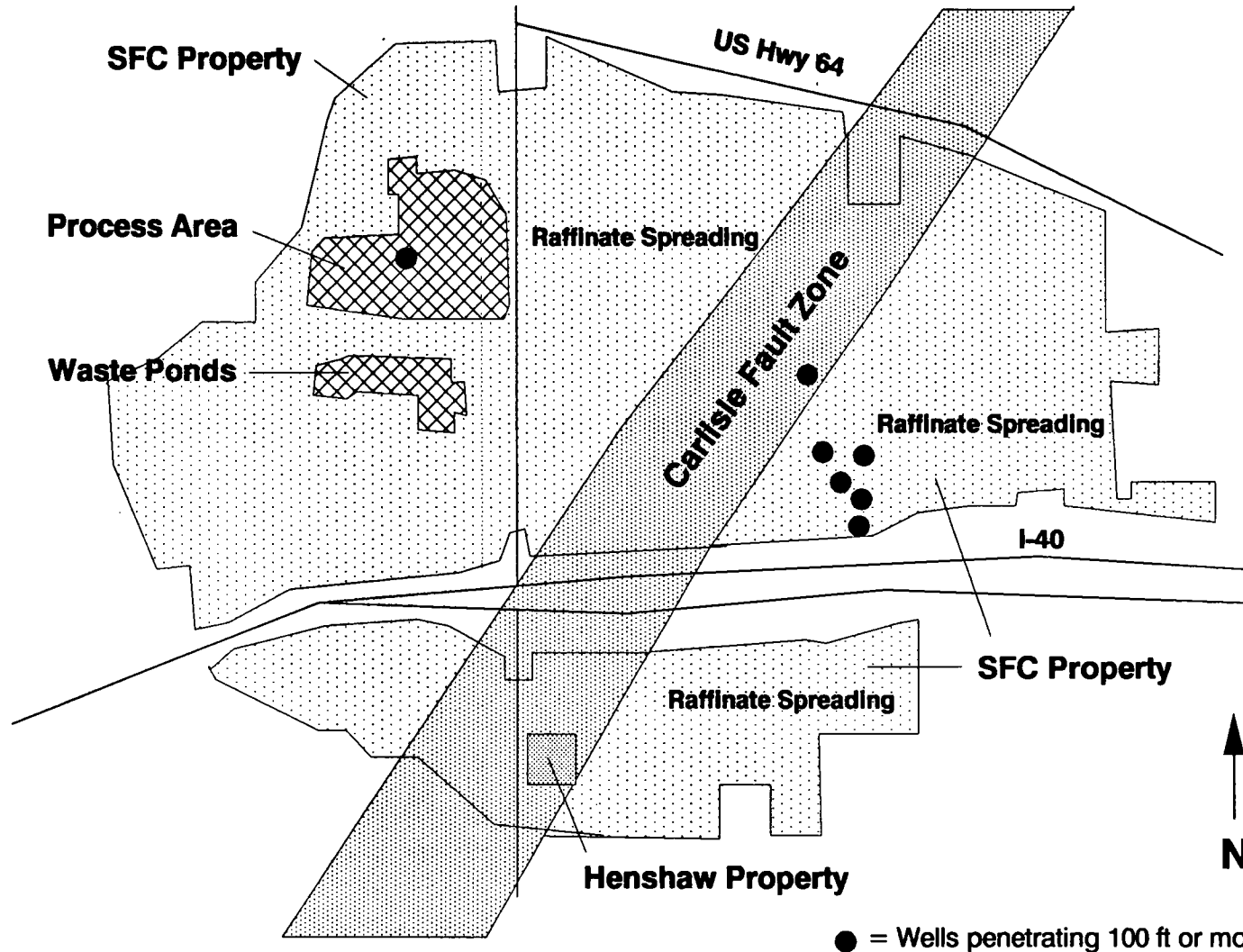
Associations

National Water Well Association

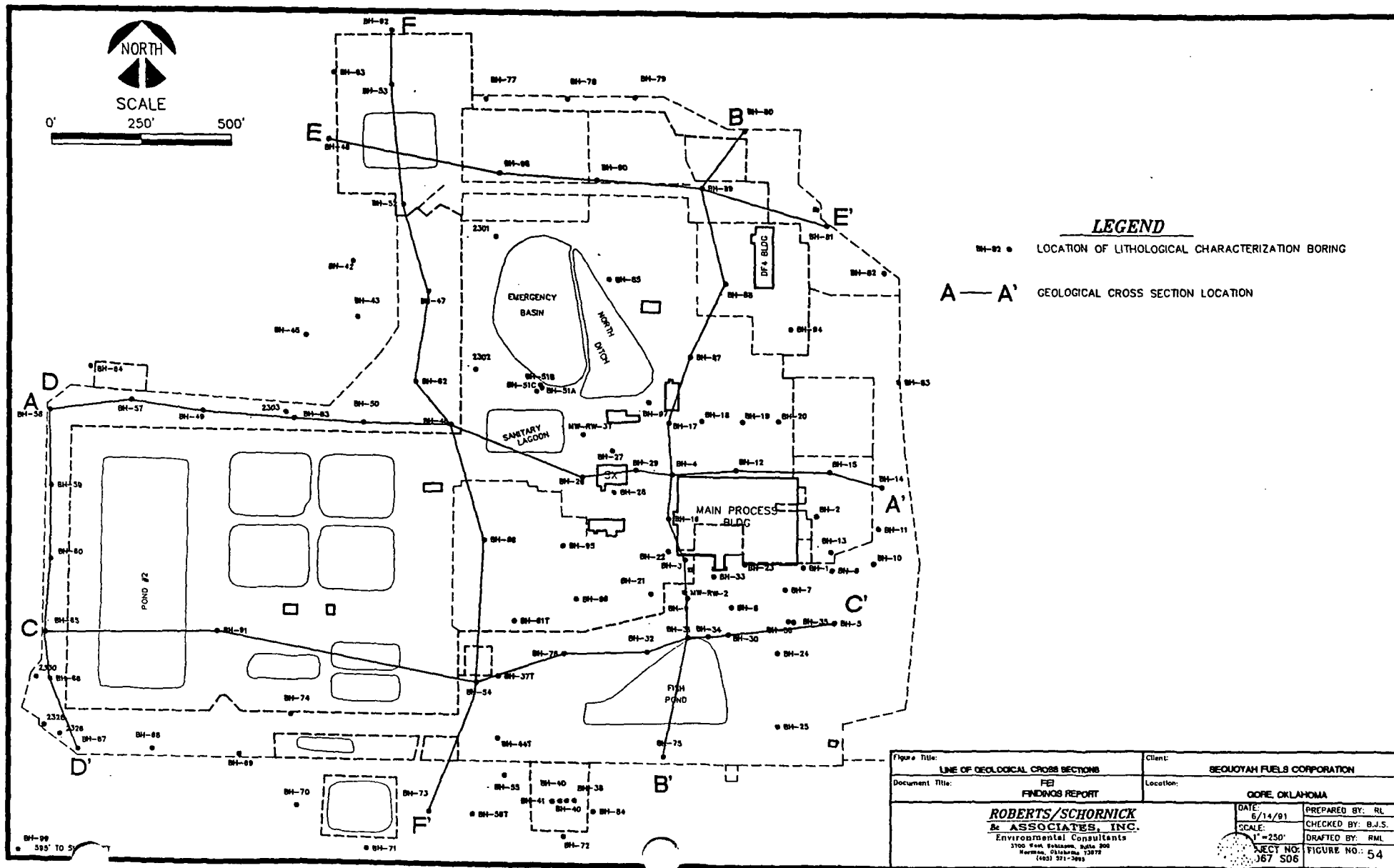
Minnesota Ground Water Association

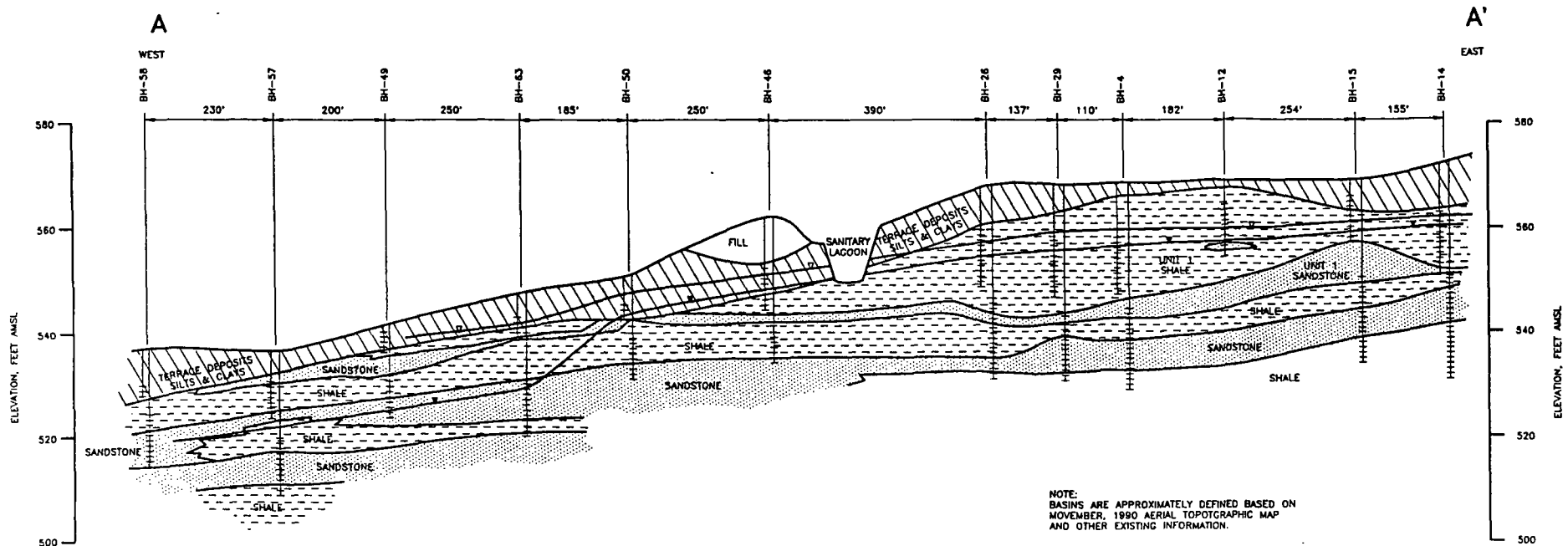
# Schematic of SFC Site and Important Local Features

Locations from: Kerr-McGee Corp., Monitor Locations Sequoyah Facility  
Site Map and Well Descriptions # 110-C-1021, and 110-C-151 Rev. 5, 1985.



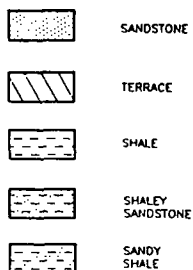
Prepared by: L. Lehman & Associates, 1993





LINE OF SECTION SHOWN ON FIGURE

# LEGEND

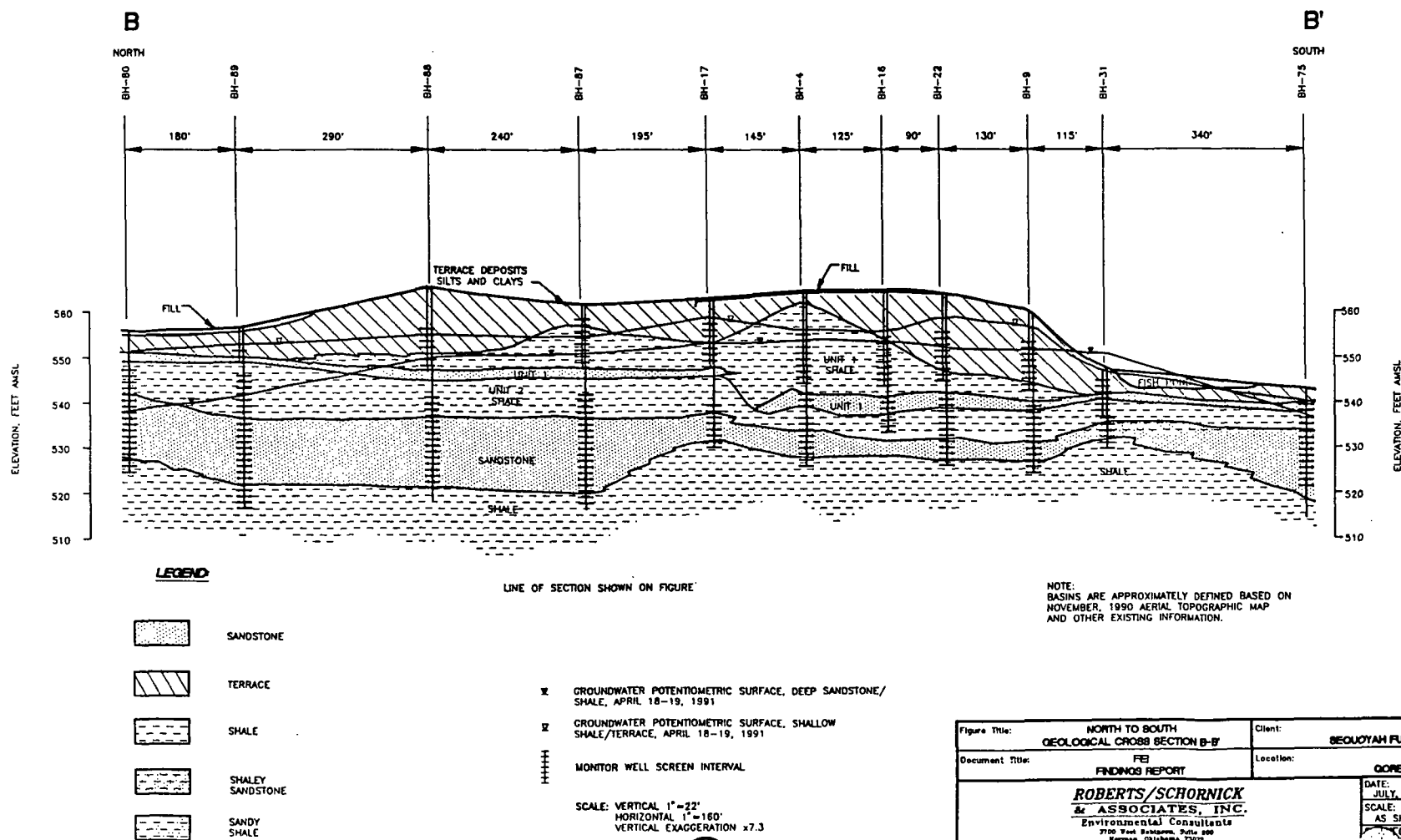


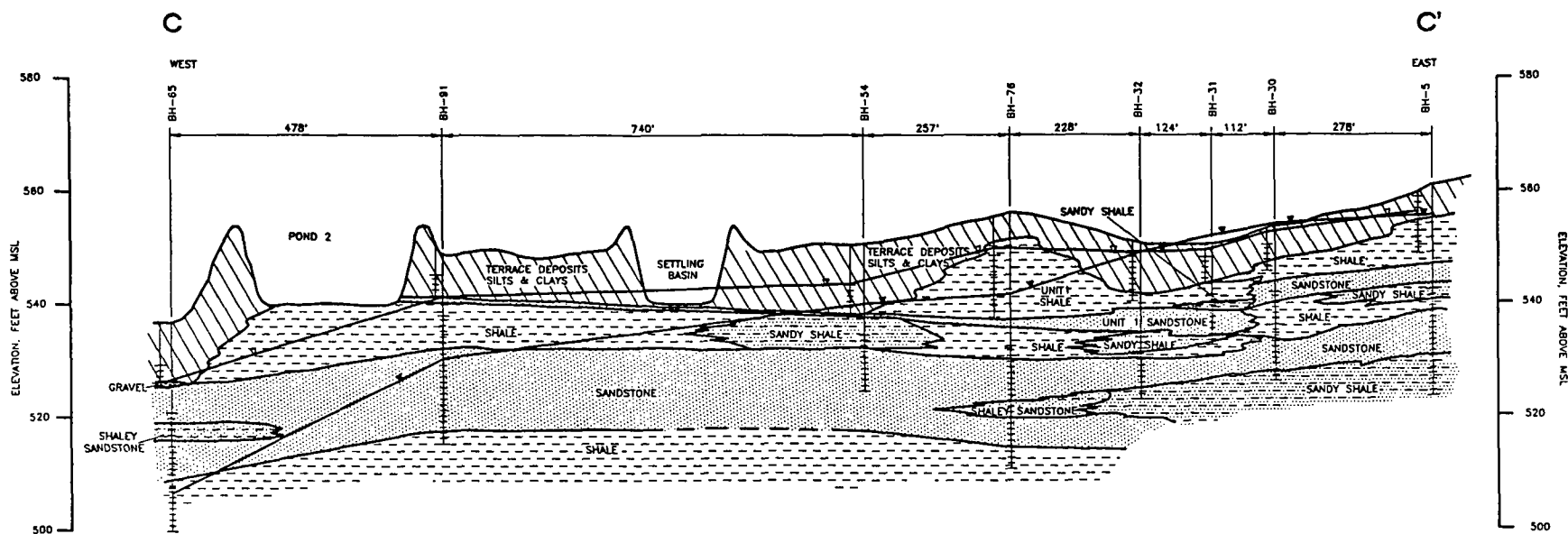
- ✕ GROUNDWATER POTENTIOMETRIC SURFACE, DEEP SANDSTONE/  
SHALE, APRIL 18-19, 1991
- ✕ GROUNDWATER POTENTIOMETRIC SURFACE, SHALLOW  
SHALE/TERRACE, APRIL 18-19, 1991
- ||||| MONITOR WELL SCREEN INTERVAL

SCALE: VERTICAL 1"=20'  
HORIZONTAL 1"=200'  
VERTICAL EXAGGERATION x10

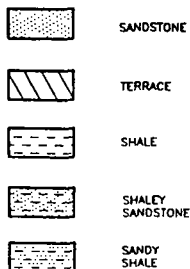
Figure Title: WEST TO EAST GEOLOGICAL CROSS-SECTION A-A'		Client: SEQUOIA FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: OORE, OKLAHOMA	
<b>ROBERTS/SCHORNICK &amp; ASSOCIATES, INC.</b> Environmental Consultants 3700 West Oklahoma, Suite 200 Norman, Oklahoma 73072 (405) 521-3885		DATE: 6/24/91	PREPARED BY: B.J.S.
		SCALE: AS SHOWN	CHECKED BY: B.J.S.
FIGURE NO.: L16		DRAFTED BY: RML	
		FIGURE NO.: 48	







# **LEGEND**



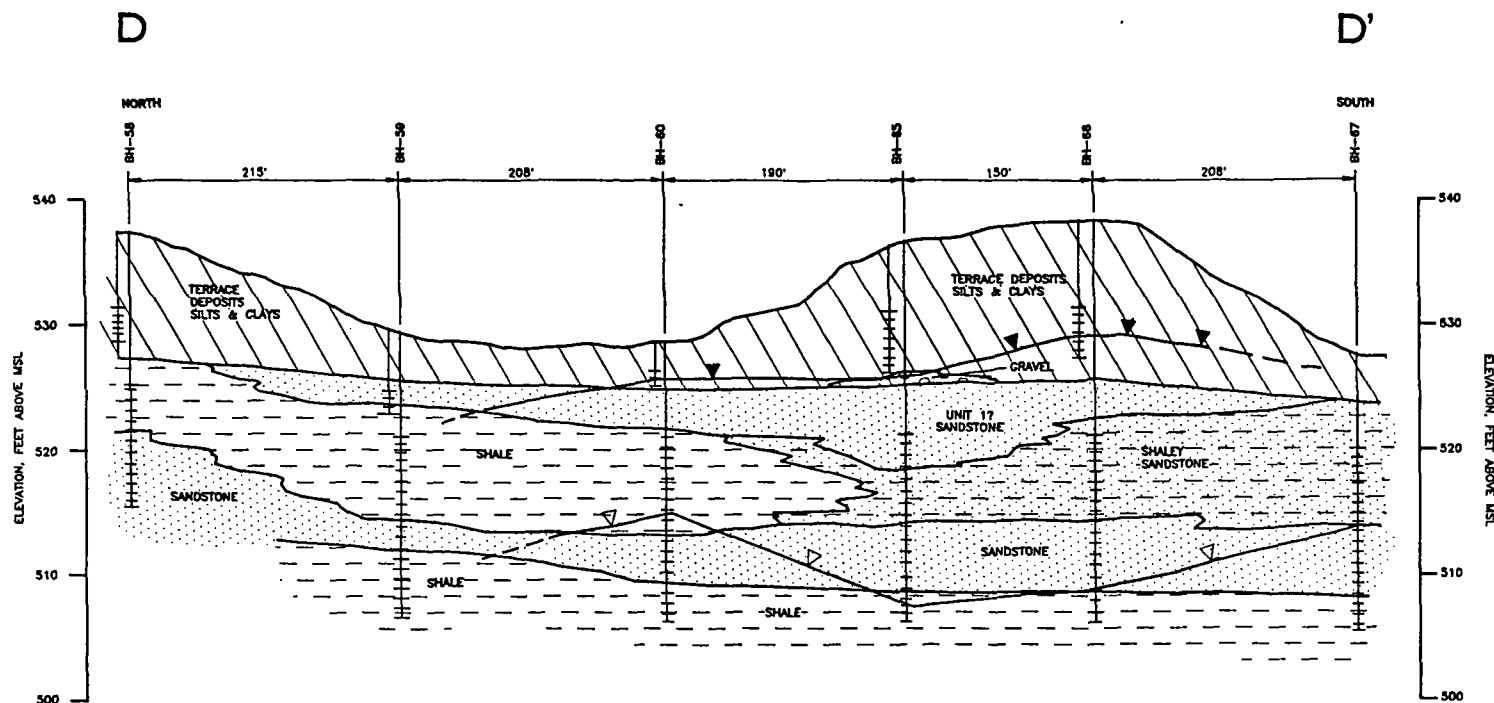
- GROUNDWATER POTENTIOMETRIC SURFACE, DEEP SANDSTONE/SHALE, APRIL 18-19, 1991
- GROUNDWATER POTENTIOMETRIC SURFACE, SHALLOW TERRACE/SHALE, APRIL 18-19, 1991
- ⊢ MONITOR WELL SCREEN INTERVAL

SCALE: VERTICAL: 1"=20'  
HORIZONTAL: 1"=200'  
VERTICAL EXAGGERATION x10

LINE OF SECTION SHOWN ON FIGURE 54

NOTE:  
BASINS ARE APPROXIMATELY DEFINED BASED ON  
NOVEMBER, 1990 AERIAL TOPOGRAPHIC MAP  
AND OTHER EXISTING INFORMATION.

Figure Title: WEST TO EAST GEOLOGICAL CROSS-SECTION C-C'		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: COORE, OKLAHOMA	
<b>ROBERTS/SCHORNICK</b> & ASSOCIATES, INC. Environmental Consultants 2700 West End Avenue, Suite 200 Norman, Oklahoma 73071 (405) 321-5895		DATE: 6/24/91	PREPARED BY: B.J.S.
		SCALE: AS SHOWN	CHECKED BY: B.J.S.
		PLOT NO: L21	FIGURE NO.: 50



# **LEGEND**

- SANDSTONE
- TERRACE
- SANDY SHALE
- SHALE
- SHALY SANDSTONE

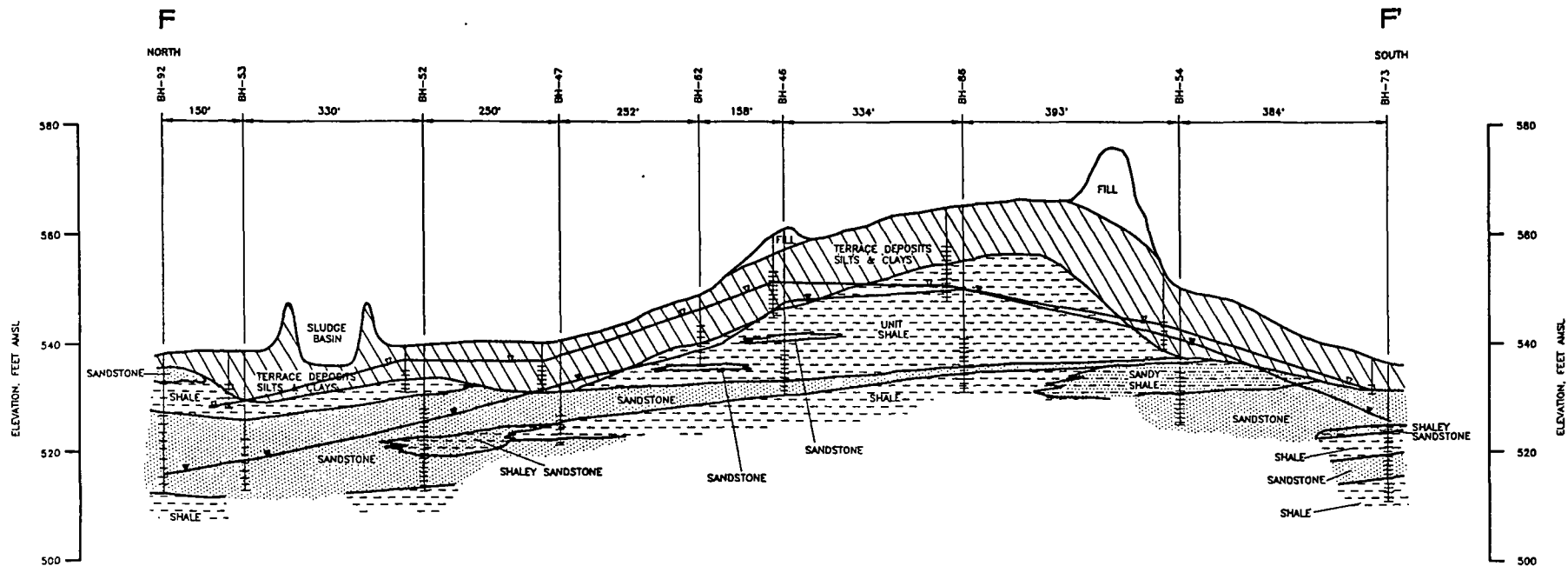
- GROUNDWATER POTENTIOMETRIC SURFACE, DEEP SANDSTONE/SHALE  
APRIL 18-19, 1991
- GROUNDWATER POTENTIOMETRIC SURFACE, SHALLOW TERRACE/SHALE  
APRIL 18-19, 1991
- MONITOR WELL SCREEN INTERVAL

SCALE: VERTICAL: 1"=10'  
HORIZONTAL 1"=100'  
VERTICAL EXAGGERATION x10

LINE OF SECTION SHOWN ON FIGURE 54

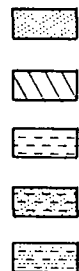
Figure Title: NORTH TO SOUTH GEOLOGICAL CROSS-SECTION D-D'		Client: SEQUOIA FUELS CORPORATION	
Document Title: FBI FINDINGS REPORT		Location: COPE, OKLAHOMA	
<b>ROBERTS/SCHORNICK &amp; ASSOCIATES, INC.</b> Environmental Consultants 3708 York Suburban, Suite 208 Norman, Oklahoma 73078 (405) 521-2846		DATE: 6/24/91	PREPARED BY: B.J.S.
		SCALE: AS SHOWN	CHECKED BY: B.J.S.
		SHEET NO: 067 L22	DRAFTED BY: C.C.G.
		FIGURE NO.: 51	





LINE OF SECTION SHOWN ON FIGURE

#### LEGEND



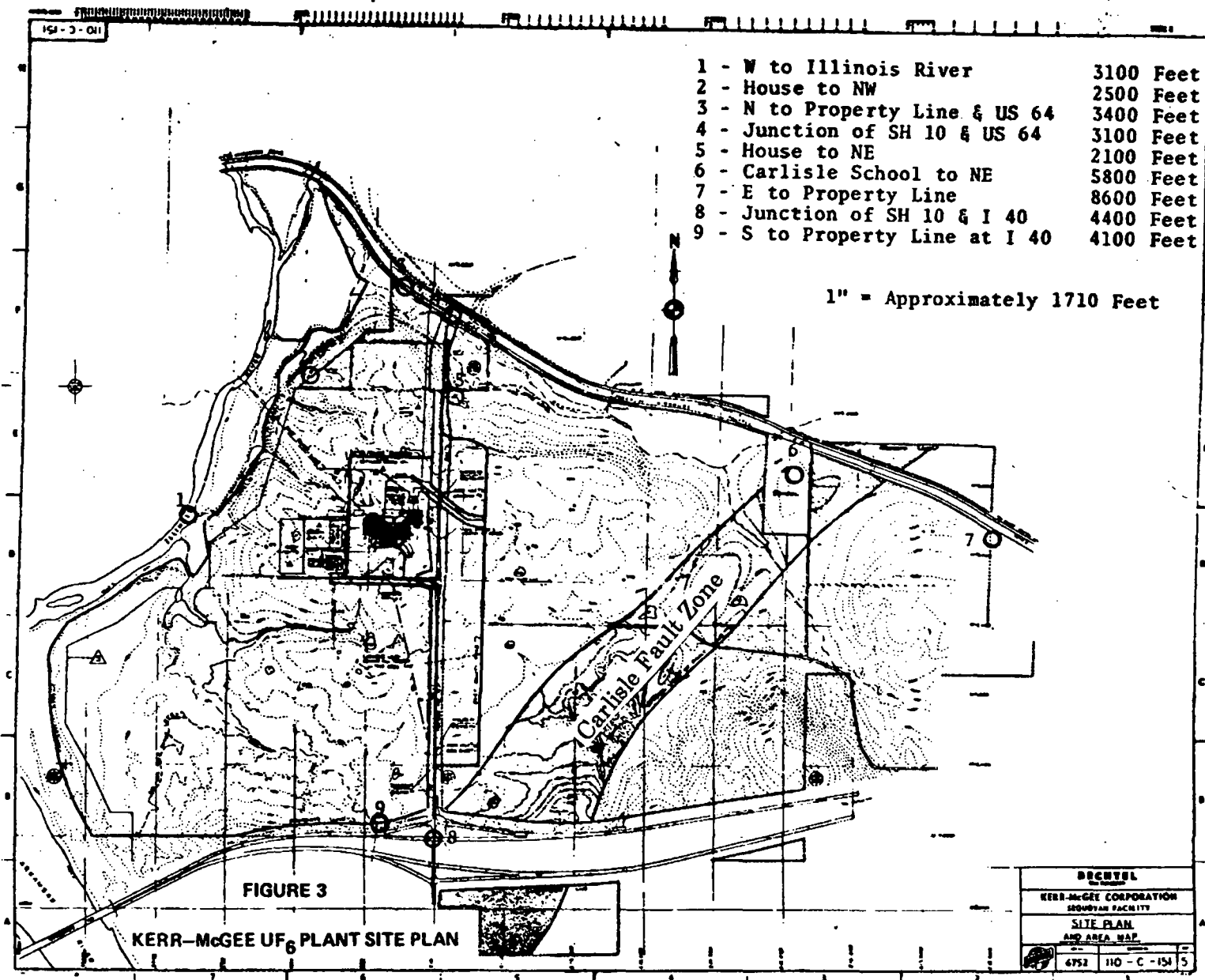
SANDSTONE  
TERRACE  
SHALE  
SHALEY SANDSTONE  
SANDY SHALE

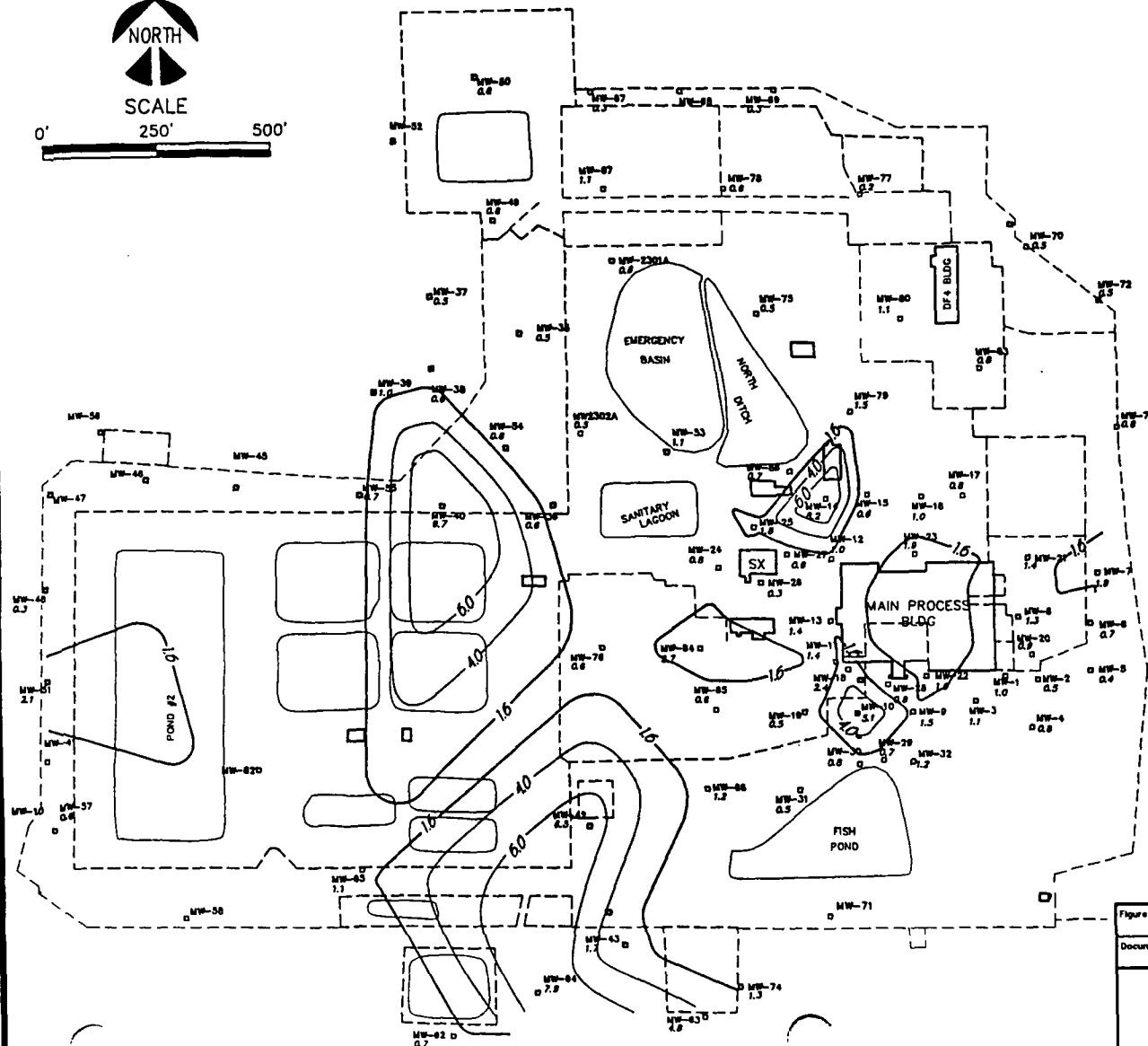
— GROUNDWATER POTENTIOMETRIC SURFACE, DEEP SANDSTONE/  
SHALE, APRIL 18-19, 1991  
— GROUNDWATER POTENTIOMETRIC SURFACE, SHALLOW  
SHALE/TERRACE, APRIL 18-19, 1991  
— MONITOR WELL SCREEN INTERVAL

SCALE: VERTICAL 1"=20'  
HORIZONTAL 1"=200'  
VERTICAL EXAGGERATION x10

NOTE:  
BASINS ARE APPROXIMATELY DEFINED BASED ON  
NOVEMBER, 1990 AERIAL TOPOGRAPHIC MAP  
AND OTHER EXISTING INFORMATION.

Figure Title: NORTH TO SOUTH GEOLOGICAL CROSS-SECTION F-F		Client: SEQUOYAH FUELS CORPORATION	
Document Title: PEI FINDINGS REPORT		Location: CORE, OKLAHOMA	
<b>ROBERTS/SCHORNICK &amp; ASSOCIATES, INC.</b> Environmental Consultants 2700 West Oklahoma, Suite 200 Norman, Oklahoma 73075 (405) 381-3886		DATE: 8/24/91	PREPARED BY: B.J.S.
		SCALE: AS SHOWN	CHECKED BY: B.J.S.
		OBJECT NO: 1067 L24	DRAFTED BY: C.C.G.
		FIGURE NO.: 53	





### LEGEND

— MW-72  
0.3 — LOCATION OF SHALLOW SHALE/TERRACE DEPOSITS MONITOR WELL AND FLUORIDE CONCENTRATION IN GROUNDWATER, MG/L, APRIL 23 TO MAY 17, 1991

— 40 — ISOPLETH OF FLUORIDE CONCENTRATION IN SHALLOW SHALE/TERRACE DEPOSIT WELLS, MG/L, APRIL 23 TO MAY 17, 1991

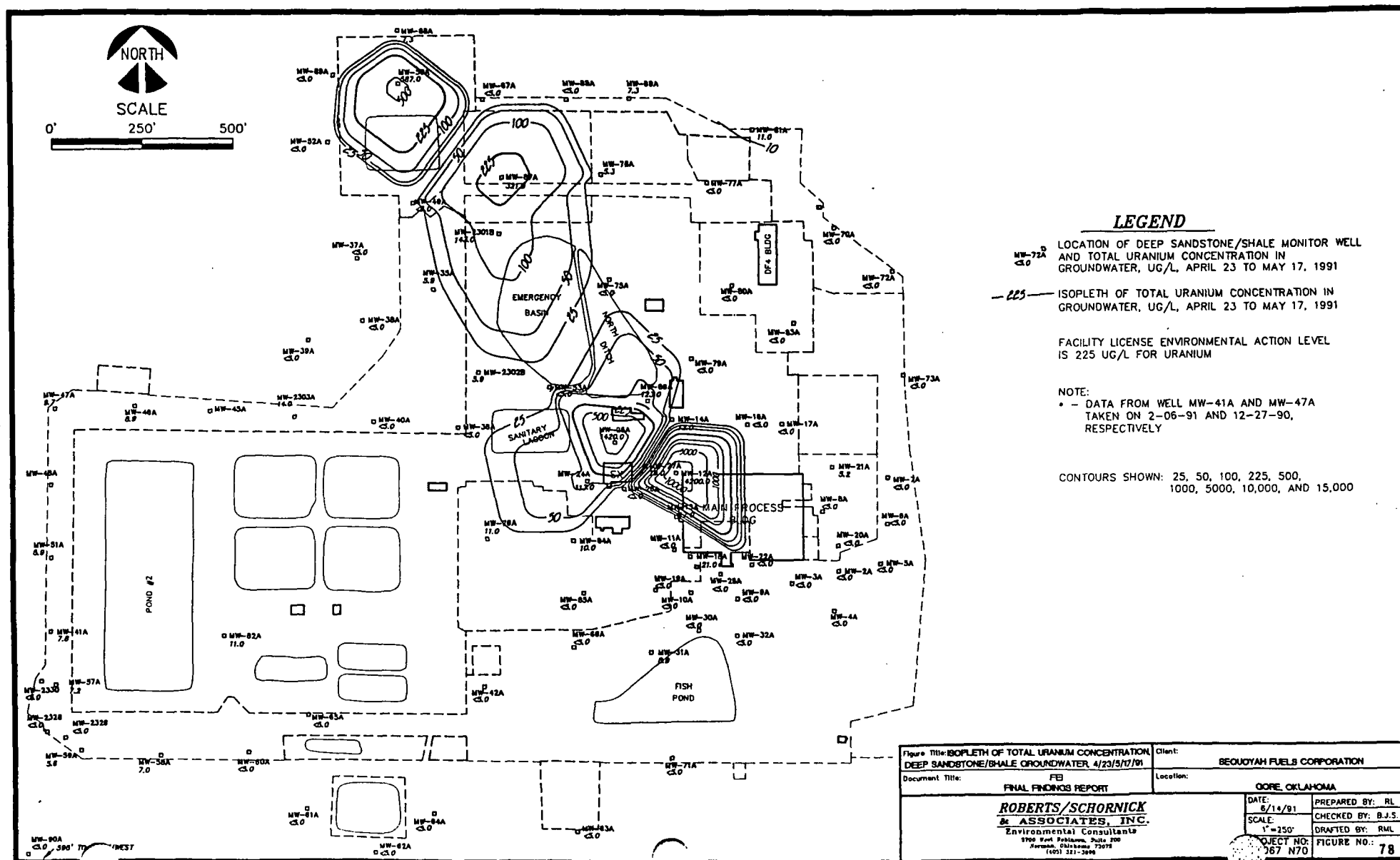
#### NOTE:

— DATA FOR WELLS MW-37, MW-48, MW-51, MW-64, AND MW-69 COLLECTED ON 3-26-91, 4-5-91, 3-26-91, 2-25-91, AND 2-25-91 RESPECTIVELY

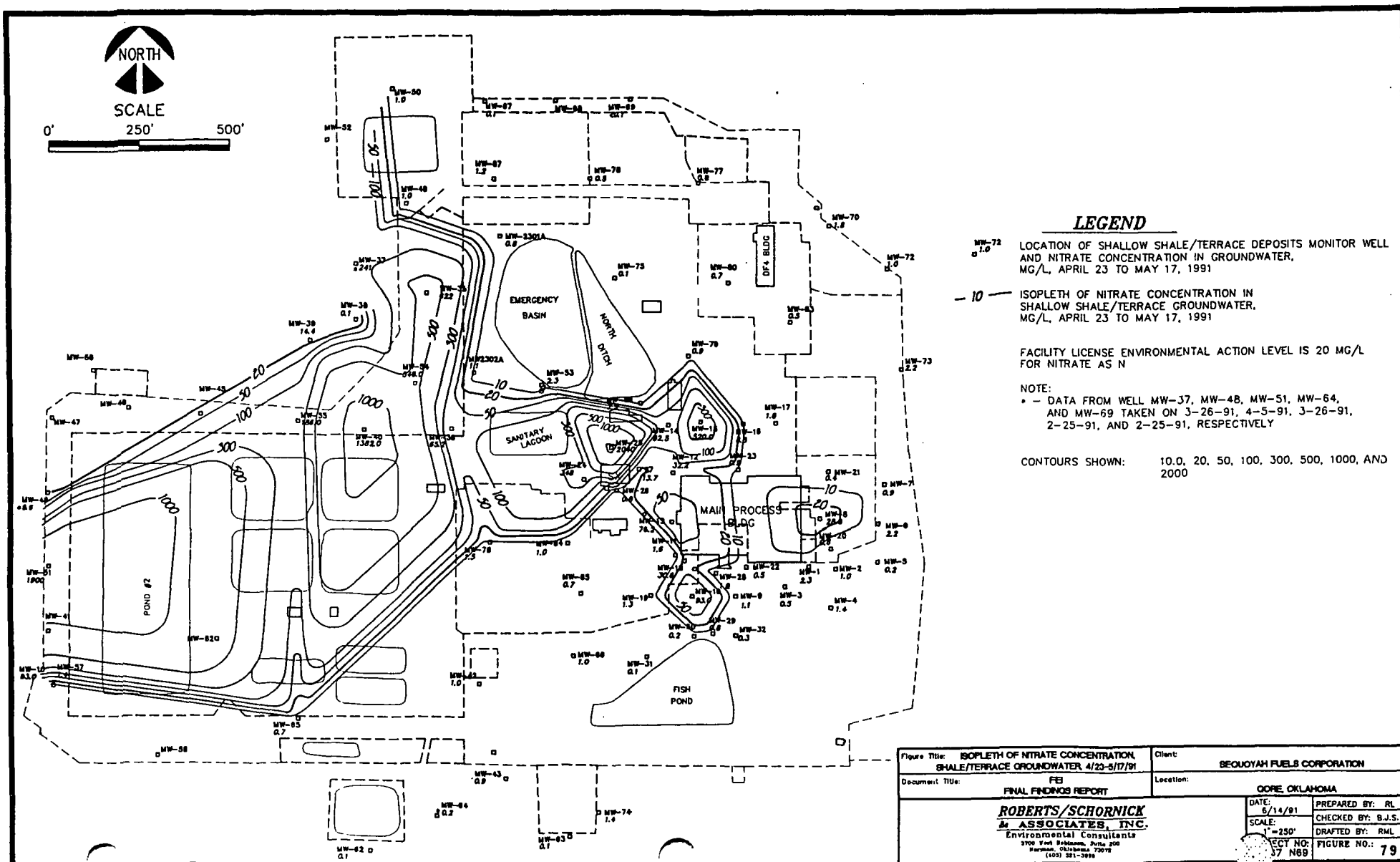
FACILITY LICENSE ENVIRONMENTAL ACTION LEVEL FOR FLUORIDE IS 1.6 MG/L

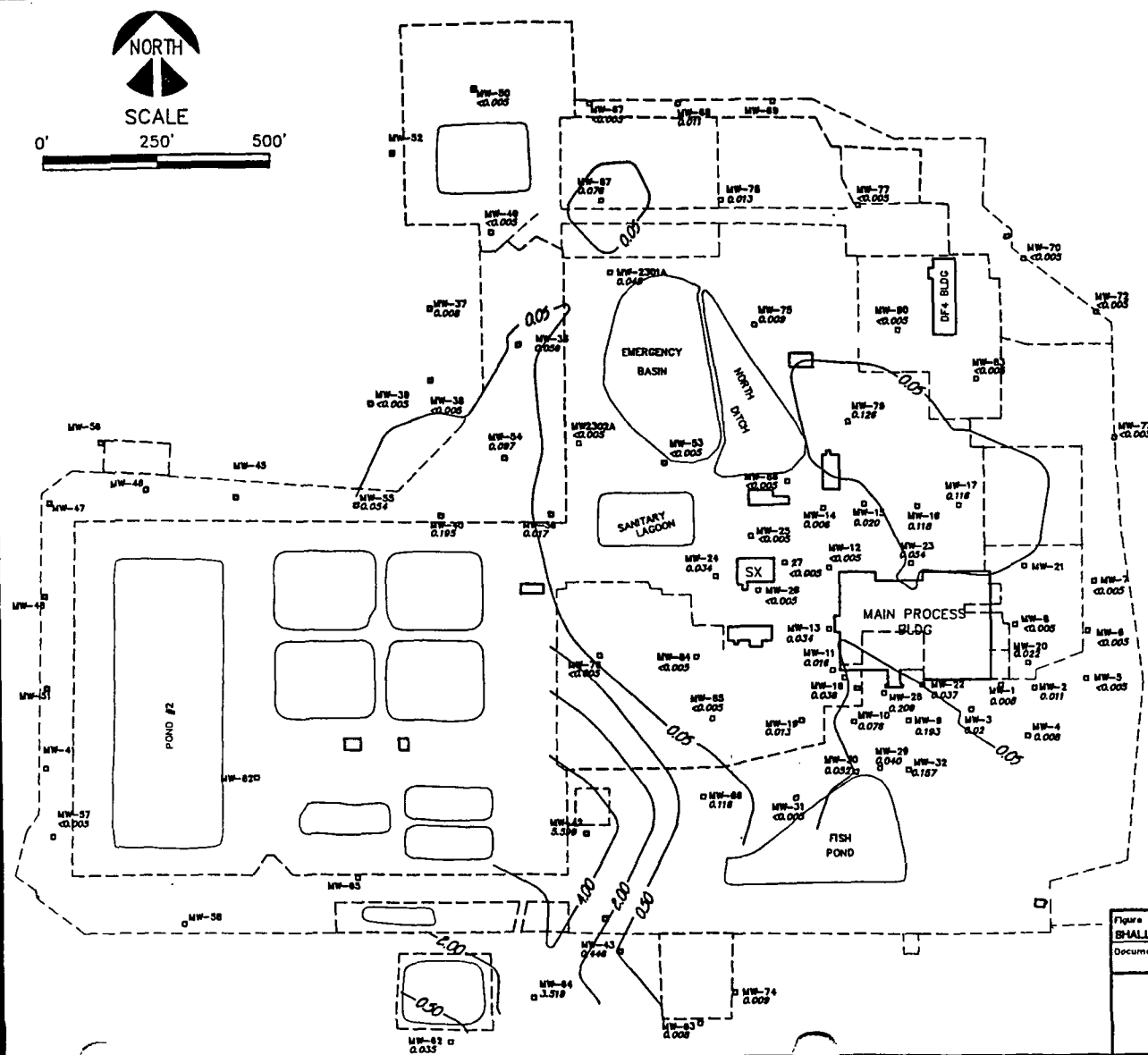
CONTOURS SHOWN: 1.6, 4.0, AND 6.0

Figure Title: ISOPLETH OF FLUORIDE CONCENTRATION, SHALE/TERRACE GROUNDWATER, 4/23-5/17/91		Client: BEQUOYAH FUELS CORPORATION	
Document Title: FEB FINAL FINDINGS REPORT		Location: COFFEY, OKLAHOMA	
<b>ROBERTS/SCHORNICK &amp; ASSOCIATES, INC.</b> Environmental Consultants 2708 East Oklahoma, Suite 200 Norman, Oklahoma 73072 (405) 311-3000		DATE: 5/14/91 SCALE: 1"=250' PROJECT NO: 90067 N73	PREPARED BY: RL CHECKED BY: B.J.S. DRAFTED BY: RML FIGURE NO.: 81







**LEGEND**

- MW-73  
0.003
- LOCATION OF SHALLOW SHALE/TERRACE DEPOSITS MONITOR WELL AND TOTAL ARSENIC VALUE, MG/L, APRIL 23 TO MAY 17, 1991
- 2.00
- ISOPLETH OF TOTAL ARSENIC CONCENTRATION IN SHALLOW SHALE/TERRACE DEPOSITS GROUNDWATER, MG/L, APRIL 23 TO MAY 17, 1991

CONTOURS SHOWN:  
0.05, 0.50, 2.0, AND 4.0

Figure Title: ISOPLETH OF TOTAL ARSENIC CONCENTRATION SHALLOW SHALE/TERRACE GROUNDWATER, 4/23-5/17/91		Client: SEQUOYAH FUELS CORPORATION	
Document Title: FEI FINDINGS REPORT		Location: GORE, OKLAHOMA	
<b>ROBERTS/SCHORNICK &amp; ASSOCIATES, INC.</b> Environmental Consultants 3700 East Robinson, Suite 200 Norman, Oklahoma 73069 (405) 331-3888		DATE: 6/14/91	PREPARED BY: RL
		SCALE: 1"=250'	CHECKED BY: B.J.S.
		PROJECT NO.: 0067 N65	DRAFTED BY: RML
		FIGURE NO.: 97	

2 P. 2 12/28/93 11:56

FROM NRC RIV DRSS

-1-

December 14, 1993

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE PNO-IV-93-038

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information is as initially received without verification or evaluation, and is basically all that is known by the Region IV staff on this date.

Facility

Sequoyah Fuels Corporation  
Sequoyah Fuels Corporation  
Gore, Oklahoma  
Dockets: 04008027 License No: SUB-1010

Licensee Emergency Classification

Notification of Unusual Event  
Alert  
Site Area Emergency  
General Emergency  
X Not Applicable

Subject: LICENSED MATERIAL FOUND OFF-SITE

On December 13, 1993, the licensee informed NRC Region IV staff of an incident that occurred during the late night/early morning of December 11-12, 1993. Licensee representatives reported that local police stopped a vehicle and that during the course of arresting two out of the three individuals present (the two were arrested for outstanding warrants), the police confiscated three hand-held two-way radios that were discovered during a search of the vehicle. While attempting to identify the owner of the radios through radio communications, the police contacted the Sequoyah facility and it was determined that the radios belonged to SFC. It appears that the radios were stolen by a former employee (the licensee and the police are investigating which employee and when the radios were stolen).

As a precautionary measure, the licensee sent a health and safety technician to the police station early on December 12, to survey the radios. The surveys indicated very low levels of smearable contamination (maximum of 35 dpm/100 square centimeters of beta), as well as low levels of fixed contamination. Although alpha and beta contamination levels identified on two of the three radios were below the release limits established by the licensee, a small area on one of the radios had fixed beta contamination levels of 20,000 dpm/100 square centimeters, which is above SFC's release level of 15,000 dpm/100 square centimeters. The licensee's technician placed all three radios in a plastic bag, marked "Caution Radioactive Materials" and, at the police's request, left them in the police station's evidence room (a locked room).

The Mayor and Chief of Police of Gore, Oklahoma, contacted Region IV staff on the morning of December 13 to report that the police department had retained the radios as evidence. Subsequent communications indicated that the Gore officials were planning to release the radios to SFC during the afternoon of December 13. Gore officials had quarantined one prisoner in "medical lockdown" prior to communications with NRC and had requested that County Health Department representatives survey the three police officers who handled the radios as well as the prisoner. Representatives of the Oklahoma Radiation Control Program reported that a member of the County Health Department and representatives from SFC planned to conduct additional surveys of police personnel on the afternoon of December 13. Based on the licensee's December 12 survey, Region IV staff have informed the Gore officials that the levels of contamination were very low and

PNO-IV-93-038

-2-

posed no hazard to the police officers who handled them, the prisoner, or any other staff.

The state of Oklahoma has been informed. Region IV received notification of this occurrence by telephone from Craig Harlan at 9:00 am. Region IV has informed NMSS.

This information has been confirmed with a licensee representative.

Contact: Michael Vasquez  
(817) 860-8121

Linda Kasner  
(817) 860-8121

2 P. 12/28/93 11:55

FROM NRC RIV DRSS

-1-

December 14, 1993

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE PNO-IV-93-038

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12/28/93 11:58 P. 3 TOTAL P. 3

FROM NRC RIV DRSS

PNO-IV-93-038

-2-

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This information has been confirmed with a licensee representative.

Contact: Michael Vasquez  
(817) 860-8121

Linda Kasner  
(817) 860-8121

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

- - - -

BRIEFING ON SITE DECOMMISSIONING MANAGEMENT PLAN

- - - -

PUBLIC MEETING

Nuclear Regulatory Commission  
One White Flint North  
Rockville, Maryland

Monday, November 8, 1993

The Commission met in open session,  
pursuant to notice, at 9:30 a.m., Ivan Selin,  
Chairman, presiding.

COMMISSIONERS PRESENT:

IVAN SELIN, Chairman of the Commission  
KENNETH C. ROGERS, Commissioner  
FORREST J. REMICK, Commissioner  
E. GAIL de PLANQUE, Commissioner

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

STAFF SEATED AT THE COMMISSION TABLE:

WILLIAM C. PARLER, General Counsel

JOHN HOYLE, Assistant Secretary

JAMES TAYLOR, Executive Director for Operations

GUY ARLOTTO, Deputy Director, NMSS

RICHARD BANGART, Director, Office of State Programs,  
NMSS

JOHN GREEVES, Deputy Director, Fuel Cycle Safety and  
Safeguards Division, NMSS

JOHN AUSTIN, Chief, Decommissioning and Regulatory  
Issues Branch, NMSS

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005



1 one is three times the limit in a zone, one would have  
2 to spend 2,000 hours in that one spot to receive a  
3 dose that is not unacceptable and that's just not  
4 going to happen. People will move around. So, we  
5 think we're reasonably conservative. The only  
6 question is do you put a cap at three times the limit  
7 or ten times the limit? That is a matter that the  
8 staff is continuing to consider.

9 But even though the NUREG is a draft, it's  
10 the best thing that we have on the street and we're  
11 urging licensees to use it.

12 COMMISSIONER ROGERS: Well, this kind of  
13 issue was brought up at the participatory rulemaking  
14 sessions and certainly it's a matter of considerable  
15 interest to certain groups. I think there is a high  
16 sensitivity to this question of averaging and it would  
17 seem to me that it would behoove us to try to get as  
18 much public input on that issue as possible because it  
19 will come time and time again until there is a general  
20 feeling that, yes, this is a reasonable thing to do.  
21 From a technical point of view, it sounds very  
22 reasonable. But if you focus just on the possibility  
23 of those hot spots, people sometimes get very upset  
24 about them. I think that it does seem to me that it  
25 shouldn't be something that's outside of the

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1 participatory rulemaking framework. It's something  
2 that's come up very much in that process and I think  
3 a great deal of care should be taken in how we  
4 finalize our position on how to do this averaging  
5 because it's a very, very sensitive issue.

6 MR. TAYLOR: We agree.

7 MR. AUSTIN: Yes.

8 MR. TAYLOR: John, continue.

9 MR. AUSTIN: Okay. Another issue which  
10 I'd like to get into on the next briefing chart later  
11 is the thorium disposal issue.

12 MR. TAYLOR: That's on the next slide.

13 MR. AUSTIN: That's on the next slide.  
14 I'll get to that in a moment. If I could just go  
15 through this one.

16 What we've learned primarily through the  
17 Chemetron case is that we have reinforced our desire  
18 to cooperate with the states as we go through the  
19 decommissioning of these sites. As we discussed  
20 earlier, there are some issues at these sites that are  
21 not under our jurisdiction but are under the  
22 jurisdiction of a state and they have that regulatory  
23 interest and we're trying to avoid a situation where  
24 a licensee has complied with or would want to comply  
25 with all of our requirements, but then to find at a

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1 very late stage that the state has an interest. So,  
2 we are trying to go into something like an outreach  
3 program with the states to keep them informed of what  
4 we're doing and what our expectations are and what our  
5 requirements are.

6 On Sequoyah Fuels, that case reinforces  
7 the link between remediation criteria and financial  
8 assurance. One cannot set a level of funding that  
9 would be required for decommissioning with confidence  
10 if one does not know what the remediation standard is  
11 going to be. There's a direct link and it can involve  
12 a factor of ten or 100 in what the decommissioning  
13 cost could be, depending on the specific remediation  
14 standard.

15 COMMISSIONER de PLANQUE: So how are we  
16 dealing with that?

17 MR. AUSTIN: In the difficult cases, and  
18 I would put all of the thorium contaminated sites in  
19 that category, we are exploring the need to perform an  
20 environmental impact statement that would look through  
21 the options, alternatives, on-site disposal, shipping  
22 to a facility like Envirocare, shipping to a used mine  
23 that would lower the human intrusion potential,  
24 examining those potential environmental impacts and  
25 arriving at what we would call an ALARA, what is as

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1 low as reasonably achievable, factoring in cost to  
2 establish the remediation standard in that way.

3 COMMISSIONER de PLANQUE: But you're still  
4 left without knowing exactly what the standard is.  
5 Suppose you dispose on-site?

6 MR. PARLER: In view of the fact, at least  
7 as I understand it, that some of these things are in  
8 litigation, I would respectfully suggest that you just  
9 keep in general.

10 MR. AUSTIN: Okay.

11 COMMISSIONER de PLANQUE: Are you  
12 currently using the branch technical position limits  
13 in this regard?

14 MR. AUSTIN: Yes, we are using the branch  
15 technical position of 1981 for uranium and thorium.  
16 We're using concentration limits that the staff has  
17 used over the years for other radionuclides, like  
18 cobalt, strontium, cesium. And when we come up with  
19 an oddball radionuclide, we try to make a comparison  
20 on a risk basis to something that has already been  
21 used.

22 On the branch technical position, it's  
23 options 1 and 2, but the action plan calls for the  
24 staff to look to an ALARA analysis, either above the  
25 line or below the line. Generically we're looking at

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1 for those where there is a potential that the  
2 remediation standard could be prohibitively expensive,  
3 we're looking at the possibility of on-site disposal  
4 in the vicinity of the site, disposal in the vicinity  
5 of the site, and entertaining the notion of exempting  
6 the licensee from the unrestricted use standard  
7 provided that there be restrictive covenants in the  
8 deed and possibly other assurances that the human  
9 intrusion scenario would be acceptably low.

10 Another option that the staff is  
11 considering is a perpetual license, in a way similar  
12 to the AMAX case. In the AMAX case the license would  
13 be terminated, but you have the federal government  
14 periodically checking up on that site. In NRC space,  
15 if there were a perpetual license, the concept would  
16 be to establish a fund, the interest from which would  
17 allow for an inspection every ten years and it would  
18 be a way to keep that site in the consciousness of the  
19 Agency.

20 So, those are the kinds of things we're  
21 looking at.

22 MR. TAYLOR: These are just ideas.

23 MR. AUSTIN: Ideas. Before we undertake  
24 any one of those kinds of things, we would consult  
25 with the Commission.

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