STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
ADMINISTRATIVE ADJUDICATION DIVISION

IN RE: General Properties

DECISION & ORDER

This matter was heard before the Department of Environmental Management Administrative Adjudication Division for Environmental Matters as the result of a Compliance Order issued to Elvira Petteruti, d/b/a General Properties on March 27, 1990. The Compliance Order was the subject of a hearing in Superior Court on May 11, 1990, at which the court held that the Order should be deemed a Notice of Violation pursuant to which a timely hearing request had been filed.

The hearing before the Administrative Adjudication Division ("AAD") was held on May 20, 22, 23, 24, 1991, June 7, 10, 13, 1991 and July 17, 1991 and was conducted in accordance with the Administrative Procedures Act and the Administrative Rules of Practice and Procedure for the Department of Environmental Management, Administrative Adjudication Division for Environmental Matters. Post-hearing memoranda were filed by the parties on or about November 18, 1991.

AUTHORITY

This matter arises under R.I.G.L. Section 46-12-5, which prohibits any person from placing a pollutant in a location where it is likely to enter the waters of the state. Pursuant to Section 42-17.1-2, the Director of the Department of Environmental Management has the authority to promulgate rules and regulations in connection with inter alia the prevention

of groundwater pollution. Section 46-12-3 specifically grants the Director authority to make rules and regulations to prevent, control and abate water pollution and to issue orders to prevent the discharge of pollutants into the waters of this State.

Under Section 11(e) of the Oil Pollution Control Regulations, the Director may require any person responsible for discharge of oil into the waters of the State to initiate remedial and clean-up activities until remediation has been achieved. The Regulations define "oil" to include petroleum and gasoline products.

PRE-HEARING CONFERENCE

The Pre-hearing Conference was conducted on March 14, 1991 by Hearing Officer Patricia Byrnes. The record indicates that the Motion to Intervene filed on or about March 12, 1991 by Attorney Pat Nero on behalf of Karabit Tashian and Souad Tashian, the present owners of the real estate which is the subject of this hearing, was granted by the Hearing Officer. Further, the parties stipulated that the Notice of Violation would run against General Properties, Inc. only; Elvira Petteruti was released as respondent.

Due to illness and her subsequent unavailability, Hearing Officer Byrnes withdrew from hearing this matter and Hearing Officer McMahon was appointed.

Respondent, General Properties, Inc. was represented by

Arlene Violet, Esq.. The Division of Groundwater and Freshwater Wetlands was represented by Stephen H. Burke, and post-hearing by Kendra L. Beaver, Esq.. Intervenors have been at various times represented by Mr. Nero, Christine J. Engustian, Esq., and more recently by Attorney Daniel P. Carter.

Due to the paucity of the pre-hearing conference record and for purposes of clarification, the parties stipulated at the commencement of the hearing the results of the pre-hearing conference. The Division offered the following witnesses:

1. Susan Kiernan	Deputy Chief of the Division of Groundwater & Freshwater Wetlands, in charge of groundwater protection.
2. Margaret Dein Bradley	Hydrologist with the Division
3. Craig Roy	Engineering Technician w\the Division
4. David Sheldon	Senior Sanitary Engineer with the Division; principal investigator in this matter.
5. Maurice Lynch	Chemist, RI Dept. of Health
6. Stewart Mountain	Engineer in Hydrogeology at EA (Division's outside consultant)

7. At hearing, the Division also called Gabrielle Seyffert,* an employee of EA, who conducted some of the monitoring well sampling.

Respondent offered two witnesses:

1. Elvira Petteruti	General Properties
2. Paul Shea	Expert in biology.

*Gabrielle Seyffert was called as a witness when it became apparent at the hearing that though Division's exhibits had been accepted as full by Respondent, Respondent had not intended that they be stipulated as to the truth of their contents.

At hearing, Respondent also offered Mr. Shea as an expert in hydrology.

Karabit Tashian, intervenor and present owner of the subject site, testified at the hearing but called no other witnesses.

The parties also agreed to the following stipulations:

1. That General Properties be substituted as Respondent, replacing Elvira Petteruti, d/b/a General Properties;

2. That the Compliance Order dated March 27, 1990 be deemed a notice of violation (NOV) under R.I.G.L Section 42-17.1-2(u) as to which the Respondent, General Properties, Inc., has made a proper and timely hearing request;

3. That the Compliance Order, now deemed to be a notice of violation, does not seek administrative penalties;

4. That General Properties, Inc., a Rhode Island corporation, was the owner of the property which is the subject of this administrative action during the time period commencing February 23, 1966 through January 3, 1990.

The Division and Respondent further stipulated that Souad and Karabit Tashian purchased the property from General Properties, Inc. on January 3, 1990.

At hearing, the Division and Intervenor stipulated that

Respondent, its agent or independent contractors, may have access to the property owned by Intervenor for the purposes of evaluating or assessing soil or groundwater contamination and for purposes of remediating soil contamination and groundwater contamination at reasonable times (T5-14, 15).

The Division provided the following list of exhibits which the parties agreed were to be marked as Full, except as noted where they were marked for identification and later admitted as full exhibits at the hearing. Respondent's counsel did not, however, stipulate to the truth of their contents. (T1-4).

DIVISION'S EXHIBITS

Full 1. Complaint/inspection reports dated April 17, 1989, May 9, 1989, with attached hand-written note (4 pp.) (p. 4 withdrawn by Division 5/20/91).

Full 2. Complaint/inspection report dated May 9, 1989 (1 p.)

Full 3. Complaint/inspection report dated May 31, 1989 with attached complaint/inspection report dated May 19, 1989, (2 pp.)

Full 4. Permanent closure application for underground storage facilities dated June 1, 1989. (6 pp.)

Full 5. Certificate of closure for underground storage facilities dated June 6, 1989. (2 pp.)

Full 6. Complaint/inspection report dated July 7, 1989.

Full 7. July 18, 1989 letter from David R. Sheldon to Elvira Petteruti (2 pp.) with certified mail receipt.

Full 8. Handwritten report of phone call dated July 29, 1989.

Full 9. Handwritten report of phone call dated August 3, 1989.

Full 10. Letter of August 3, 1989 from Kevin A. Doherty to David R. Sheldon (1 pp.)

Full 11. Letter of August 4, 1989 from Arlene Violet to David R. Sheldon (2 pp.)

Full 12. Letter of August 4, 1989 from Arlene Violet to Kevin A. Doherty (1 pp.)

Full 13. Letter of August 24, 1989 from Kevin A. Doherty to David R. Sheldon (1 pp.)

Full 14. Letter of August 24, 1989 from Arlene Violet to Kevin A. Doherty (1 pp.)

Full 15. Letter of August 25, 1989 from Arlene Violet to David R. Sheldon (1 pp.)

Full 16. Letter of August 31, 1989 from Charles P. Messina to Arlene Violet (2 pp.)

Full 17. Letter of September 6, 1989 from Arlene Violet to Charles P. Messina (1 pp.)

Full 18. Letter of September 15, 1989 from Kevin A. Doherty to Ms. Elvira Petteruti (1 pp.)

Full 19. Letter of September 20, 1989 from Charles P. Messina to Arlene Violet (3 pp.)

Full 20. Service Station Maintenance Corporation Phase 1-Site Assessment: Sun Valley Mobil, East Greenwich, RI dated July 1989 (40 pp., including appendixes A, B, C, and D).

Full 21. Letter of October 10, 1989 from Charles P. Messina to Arlene Violet (2 pp.)

Full 22. Complaint/inspection report dated November 9, 1989 (1 pp.)

Full 23. Memorandum of November 10, 1989 from Ronald Gagnon, Solid Waste Supervisor, to David R. Sheldon, Senior Sanitary Engineer (2 pp.)

Full 24. Letter of November 21, 1989 from Charles P. Messina to Arlene Violet (2 pp.)

Full 25. Service Station Maintenance Corporation: In-situ Treatment of Excavated Soils; Sun Valley Mobil, East Greenwich, RI dated October 1989 (13 pp. inc. App. A)

Full 26. Letter of January 3, 1989 from Kevin A. Doherty to Charles P. Messina (cover letter with attached October 1989 Service Station Maintenance Corporation report, consisting of fourteen pages in total).

Full 27. Letter of December 14, 1989 from Kevin A. Doherty to Charles P. Messina (1 pp.)

Full 28. Letter of January 3, 1989 from Kevin A. Doherty to Charles P. Messina (1 pp.)

Full 29. Memorandum dated January 11, 1990 from Ronald Gagnon, Solid Waste Supervisor, to David R. Sheldon, Senior Sanitary Engineer (1 pp.)

Full 30. Complaint/inspection report dated January 18, 1990 (1 pp.)

Full 31. Complaint/inspection report dated January 19, 1990 (1 pp.)

Full 32. Letter of January 25, 1990 from Arlene Violet to Charles P. Messina (2 pp.)

Full 33. Letter of February 21, 1990 from Charles P. Messina to Arlene Violet (2 pp.)

Full 34. Complaint/inspection report dated March 5, 190 (1 pp.)

Full 35. Compliance Order dated March 27, 1990 to Elvira Petteruti, d/b/a General Properties (5 pp., inc. cover letter and return mail receipt).

Full 36. Memorandum of April 12, 1990 from Ernie Panciera to David Sheldon (1 pp.)

Full 37. Letter of April 13, 1990 from Arlene Violet to Stephen G. Morin (1 pp.)

Full 38. Complaint/inspection report dated April 24, 2990 (1 pp.)

Full 39. Complaint/inspection report dated May 4, 1990 with

superimposed photograph on Xerox copy (1 pp.)

Full 40. Report of phone call/visit dated May 15, 1990 (1 pp.)

Full 41. Complaint/inspection report dated May 21, 1990 (1 pp.)

Full 42. Complaint/inspection report dated June 6, 1990 (1 pp.)

Full 43. Complaint/inspection report dated June 15, 1990 (1 pp.)

Full 44. DEM Analytical Data (56 pp.)

Full 45. Limited Subsurface Investigation, Former Sun Valley Mobil Gasoline Service Station, 3333 South County Trail, East Greenwich, RI, RIDEM Task No. GW 7 dated March 1991.

Full 46. Cumberland Farms Registration File

Full 47. Cumberland Farms Tank Test Results

Full 48. Deed from General Oil Co., Inc. to General Properties, Inc.

Full 49. Deed from General Properties, Inc. to Karabet and Souad Tashian.

Full 50. Resume of David Sheldon

Full 51. Resume of Susan Kiernan

Full 52. Resume of Stewart Mountain

Full 53. Resume of Margaret Dein Bradley

Full 54. Resume of B. Allyn Copp*

Full 55. Resume of Sofia M. Maczor Bobiak*

Full 56. Resume of Craig Louis Roy

Full 57. Resume of Maurice Lynch

Full 58. Department of Health, Division of Laboratories (DEM 58 for ID) date collected February 8, 1991.

*While the resumes of Mr. Copp and Ms. Bobiak were provided by the Division, they were not called as witnesses.

Full 59. "Gab's Notes w/Allyn surveying".
(DEM 59 for ID)

Full 60. Figure 2 Site Plan - SSM Environmental
(DEM 60 for ID)

Full 61. Well Sampling notes - Tuesday, October 23. 1990,
(DEM 61 for ID) Sun Valley Mobil

Respondent provided the following list of exhibits which were marked for identification:

RESPONDENT'S EXHIBITS

Resp. 1 for ID — Letter of March 31, 1988 from Arlene Violet to Precision Testing Co., Inc., with attached precision test results.

Resp. 2 for ID — Letter of September 6, 1990 from Stephen H. Burke to Arlene Violet (2 pp.)

Resp. 3 for ID — Invoice #1558E, from Service Station Maintenance Corporation to General Oil Company (4 pp.)

Resp. 4 for ID — Memorandum of March 22, 1990 from Arlene Violet & Law Associates to David Sheldon with attached letter of March 19, 1990 (2 pp.)

Resp. 5 for ID — Letter of December 12, 1990 from Arlene Violet to Robert Seymour

Resp. 6 for ID — Agreement for Purchase and Sale dated November 28, 1989 between General Properties, Inc. and General Oil Co., Inc., RI corporations, as Sellers and Karabet Tashian and Souad Tashian, as Buyers pertaining to property located at 333 South County Trail, East Greenwich, RI (8 pp.)

Resp. 7 for ID — Letter dated May 17, 1990 from Joyce E. Schultz to Sav Mancieri with attached precision test results (14 pp.)

Resp. 8 for ID — Tank system tightness test dated April 1, 1987 pertaining to Town and Country Transportation Company, South County Trail, East Greenwich, Rhode Island (2 pp.)

Resp. 9 — Data chart for tank system tightness test dated May

for ID 22, 1987 pertaining to Town and Country Transportation (2 pp.)

Resp. 10 for ID Copy of handwritten notes and telephone message slip dated May 10, 1990 (1 pp.)

Resp. 11 for ID Data chart for tank system tightness test dated August 24, 1989 pertaining to General Oil Co., Inc., 208 Gansett Avenue, Cranston, RI (8 pp.)

Intervenor did not submit any exhibits at the hearing.

BACKGROUND

The within Compliance Order, now to be treated as a notice of violation, concerns the former Sun Valley Mobil Gasoline Service Station located at 3333 South County Trail in East Greenwich, RI. The "Findings of Fact" set forth therein asserts that DEM had received a report of a failed precision test on one of the gasoline tanks at the Mobil Station; that an inspection by DEM on May 9, 1989 indicated the presence of free product (gasoline) in an observation well adjacent to the tank; that free product was noted at the bottom of the excavation pit following removal of the underground storage tanks (USTs); that petroleum-contaminated soils were identified and that visible holes were found in two of the tanks.

The "Findings of Fact" further set forth that Ms. Petteruti was advised by certified letter dated July 18, 1989 that a site assessment and groundwater monitoring program were required and that the contaminated soils be removed as required by State regulations. The site assessment report

received by DEM on August 29, 1989 concluded that the groundwater was contaminated with gasoline originating from the tank field area.

A proposed plan to treat contaminated soils was approved by DEM on January 23, 1990. On March 27, 1990 the Compliance Order was issued, setting forth the above allegations and ordering that certain actions be taken by Respondent according to a specific time-table.

ARGUMENTS

It is the Division's position that Respondent General Properties, Inc. as the owner of Sun Valley Mobil prior to January 1990, permitted the discharge of oil into the groundwater in violation of R.I.G.L. Chapter 46-12 entitled "Water Pollution", the "Oil Pollution Control Regulations" and the "Regulations for Underground Storage Facilities Used for Petroleum Products and Hazardous Materials". The Division contends that Respondent was properly required to assess the damage resulting from the discharge and to immediately initiate remediation activities but that Respondent failed to fully assess the extent of the groundwater pollution resulting from the discharge and failed to take effective action to remediate the soil contamination and the groundwater pollution.

Respondent presents several arguments which, in essence, are that there are other possible sources for the groundwater

contamination, besides Respondent's tanks, which were not properly studied or eliminated and that, in any case, Respondent complied with the Division's requirements for assessment and remediation.

Intervenor's position was somewhat less clear because of difficulty in understanding his testimony due to language obstacles. It is a fair summary to say that he suspected problems with the site and wanted Respondent to complete the remediation.

HEARING SUMMARY

I. THE SITE

As identified by the EA site assessment report (Exh. 45), the subject site consists of approximately 1.5 acres and includes the properties located 3323, 3333, and 3347 South County Trail (Route 2), East Greenwich, RI. The area is represented in the site plan marked "Figure 2" which is attached hereto as Appendix A.

The surface of the site runs from an elevation of 98.58 feet at monitoring well EA6 in the northwest corner to 96.91 feet at monitoring well EA4 in the southeast corner, for an area that is flat to gently sloping. The eastern half of the site is comprised of large areas paved with bituminous concrete consisting of Route 2 itself as well as various parking areas--for the Cumberland Farms gasoline service station/convenience store, the former Sun Valley Mobil

property, and for Richard's Pub. The western half of the site consists of bare pit-run gravel with occasional sparse vegetation (grass and weeds).

The Citgo Gasoline Service Station, formerly Sun Valley Mobil, is located at 3333 South County Trail in the central portion of the site. The southwestern corner of the site provides an unpaved area which is used by Town and Country Transportation as a parking area for public school buses. The area also contains an underground storage tank which holds diesel fuel for the school buses.

According to the testimony of Division's witness, Stewart Mountain, the groundwater flows in a southeasterly direction from the vicinity of the former tank grave towards Route 2 (T5-115). Paul Shea, Respondent's witness, testified that the groundwater flow into the tank grave area was easterly from monitoring wells EA-5 and EA-6. (T8-17)

In this area there are at least nine known underground storage tanks. (T6-13)

II. REMOVAL OF TANKS

In April 1989, the Division was notified that several of the underground storage tanks on the Sun Valley Mobil property had failed a precision "tightness" test. (Exh. 1). Division's witness David R. Sheldon, the investigator responsible for management of this case, testified that he visited the site on May 9, 1989 and tested the monitoring well located in the

vicinity of the tanks. Through use of a bailer and interface probe, he observed the presence of free-floating petroleum product. (T1-103) While on site, he verified that two underground storage tanks which had failed precision tests were removed of all product as required by the regulations.

On May 31, 1989 he returned to the site during tank removal and observed free petroleum product in the tank grave floating on the water surface. Using a bailer, he confirmed the presence of gasoline. (T1-111). Both tanks (#003 and #002) had holes that varied in size from a dime to the size of a pencil hole. (T1-117).

As is standardly done in tank removals, soil was removed from both sides of the tank and underneath where the tank had been; it was then stock-piled at the edge of the excavation and later removed to the rear of the property pending ultimate disposal. Mr. Sheldon testified that "the gasoline odors were so strong that I had to use a mask to eliminate headaches on the site". (T1-118, 119).

On June 2, 1989, David Sheldon also witnessed the removal of tanks #005 and #001 which contained similar sized holes as those found in the previously removed tanks. (T1-125). He observed that the stockpiled soil from the first two tank graves had been removed to the rear of the station with polyurethane plastic both beneath and covering it.

On cross examination, Mr. Sheldon further testified that

after the water and free phase product was pumped from the graves, he requested that General Properties fill the holes with clean sand, which was done. When the new tanks arrived, the clean fill was re-excavated. He directed agents of General Properties to dig down and remove thirteen (13) feet of soil, approximately 125 cubic yards (T3-115, 116). New tanks were then installed and the graves refilled.

Though the water and free product had been pumped out, David Sheldon testified that this would not affect hydrocarbonswhich may have dissolved in the groundwater. (T3-165).

Respondent's counsel stipulated that General Properties hired Kevin Doherty to install monitoring wells, prepare a site assessment and draft a proposal for in-situ treatment. David Sheldon thereafter received a Phase 1-Site Assessment prepared by Service Station Maintenance Corporation (Exh. 20). Five (5) monitoring wells were installed on site: OW-1, OW-2, OW-3, E-1, and E-2.

Respondent's second proposal for in-situ soil treatment was approved by the Division. (Exh. 26). The treatment process was begun but the Division did not receive the semi-monthly reports which it had sought in the compliance order (now NOV).

The Division obtained a consultant, EA Engineering,

Science and Technology, to ascertain the extent of the contamination off the property. EA supervised the installation of six (6) additional groundwater monitoring wells: EA-1, EA-2, EA-3, EA-4, EA-5 and EA-6. The locations of the monitoring wells are identified on Appendix A attached hereto, with the exception of monitoring well OW-3. Testimony clarified that the second and southern-most well marked "OW-1" is actually OW-3.

III. THE MONITORING WELLS

On October 23, 1990 and again on February 8, 1991, samples were drawn from the monitoring wells. The October sampling was conducted by Gabrielle Seyffert from EA Engineering who was assisted by David Sheldon; David Sheldon and Bruce Catterall, a registered engineer with the Department of Environmental Management, sampled in February.

The procedure for sampling is very stringent in order to prevent outside contamination of samples. As Mr. Sheldon explained in his testimony:

> In each case it is imperative that we maintain clean conditions and use latex gloves at each well. After the sample is taken, we remove the gloves and throw them away, even the string that attaches to the bailer is removed and eliminated, thus eliminating the problem of cross-contamination from any other well taken on the site. (T2-64).

The EPA protocol for sampling requires that it first be verified that that the monitoring well has not been tampered with; a clean bailer is then used to remove three (3) volumes

from the well in order to evacuate any "old" water that may be located in the monitoring well and as a result obtain a representative aquifer sample--in this case, the volumes removed from each well amounted to approximately 3-5 gallons of water and took approximately 10-15 minutes; the well should then be allowed to "settle down" for a period of ten to fifteen minutes more before using the same bailer to fill the sample jars. (T3-137, 138; T5-42-44). The sampling itself takes only a couple of minutes for each well.

The EPA has a particular protocol for collecting groundwater samples when volatile organics are suspected, typically when gasoline presence is being tested: the sample is placed into a 40 mil vial filled completely to the top with no head space, the cap put on the jars and the containers removed to a cooler. No filtering is allowed. (T5-46-47).

Stewart Mountain, a professional engineer at EA Engineering who was qualified as an expert witness in the areas of the proper procedure for monitoring well design and sampling, testified that the remaining steps to be completed for proper sampling would be to fill out the chain of custody forms and to record the times and procedure used in the sampler's field book. (T5-44).

Testimony referred to two types of bailers--Teflon and steel. In describing the preparation for sampling, Mr. Sheldon indicated that DEM used bailers contained in a sealed

plastic wrapper and utilized one bailer for each well; EA used steel bailers which required cleaning between samples. He explained that DEM formerly used steel bailers but switched because it was a time-consuming process to clean the bailer in order to sample the next well. He testified that it takes approximately fifteen (15) minutes to clean the steel bailer by using methanol with a triple rinse of deionized water. (T3-128-130).

David Sheldon testified that "standardly" two people would be present, both to verify the sampling and because the procedure could be awkward when done alone:

> It's not difficult to obtain the samples, it's difficult to pour the water into the jar. It's difficult to do that by yourself...because you're trying to hold a heavy bailer filled with water, and the container itself has to be steady, but one person can do it, and I've done it a number of times (T3-127).

A. THE OCTOBER SAMPLING

In Sheldon's testimony regarding the October 1990 sampling, he indicated that he met Gabrielle Seyffert on site at 8:30 a.m. He remembered that Gabrielle Seyffert had two (2) steel bailers on site and used one for monitoring well EA-5 and one for monitoring well EA-6. (T3-128-130). He witnessed her draw samples from these two wells but did not assist. He testified that she followed the same method that he had used in sampling. (T3-126-127). Sheldon stayed to prepare the documents for the sampling points then left the site around 10:30 a.m. to return later in the afternoon,

between two and three o'clock (T3-131, 134, 140).

Other than the samples drawn from EA-5 and EA-6, Sheldon was not present when Ms. Seyffert gathered samples from the other points. (T3-133). Later he clarified that he was present when she was finishing and, to the best of his memory, he assisted in bailing three wells--OW2, OW3 and E2--by using Gabrielle Seyffert's steel bailers. In describing the process, he testified that he used a separate bailer on each well and left it suspended within the well and used a new one on the next well--then the appropriate bailer would be used to draw the sample. He neither recalled cleaning any bailers nor observed Ms. Seyffert clean them. Bailing OW-2, OW-3 and E-2 took approximately one hour. Ms. Seyffert then conducted the sampling. (T3-136-138, 148).

David Sheldon also stated that Gabrielle Seyffert was sampling monitoring wells EA1 through EA4 on the other side of Route 2 while he was bailing the three wells. (T3-140).

Gabrielle Seyffert also described the events of her sampling on October 23, 1990. Her testimony differed from David Sheldon's in a number of ways: She testified she used Teflon bailers for the sampling, had never used a stainless steel bailer and did not use one at the site, though she had brought one with her (T4-34, 66-68); She also testified that she began the sampling process on the first well at 10:30 a.m. and had completed it and started on well five (presumably EA5)

by 11:15 a.m. (T4-79-80). There was much that this witness did not remember about the sequence of events, when David Sheldon was present, or even if she drew all the samples. Her testimony under cross-examination is largely illuminating for all that she did not recall or remember.

She did, however, have her field notes. (Exh. 61). Her testimony was that the times listed therein were "start times". (T4-79).

The discrepancies in testimony clearly call into question at least one witness' recollection of what occurred on the site.

Ms. Seyffert described the sampling process according to the EPA protocol of first examining the monitoring well for cracks or tampering, then unlocking the well and using a water level indicator in order to calculate the three volumes to be removed prior to sampling (T4-27, 31-32). Including the water level measurements, she testified that it took her between fifteen (15) to twenty-five (25) minutes to sample each well (T4-63). Because she had an insufficient number of bailers, she had to decontaminate some of the bailers at the site for re-use on other monitoring wells. (T4-67).

She was told the order in which to sample the wells and explained the rationale for the sampling sequence: "You're supposed to sample the least contaminated, most suspected least contaminated wells first". (T4-75, 76). Though she

should have tested OW1, OW2, OW3, E1 and E2 in addition to those six wells installed by EA, it appears that samples were not submitted for monitoring wells OW3 and E1.

In her testimony she indicated that the last well sampled was E2 which she began at 2:11 p.m. on October 23, 1990. Under cross-examination, however, she was less certain which well had been sampled:

> Q. And it's fair to say, isn't it, Ms. Seyffert, that the last one could have either been one or two, because your own notes show a marking over?
>
> A. It could have been. (T4-88, 89)

Whichever was the last well, after sampling was completed, she locked up the well and decontaminated the remaining bailers. (T4-50). Sampling the well would have taken about fifteen minutes, according to Ms. Seyffert, and clean-up about five to ten minutes. (T4-84). She obtained the completed paperwork to bring with her to the Department of Health laboratory from David Sheldon. (T4-85). A form was even submitted for monitoring well OW3 despite the fact that the well had been dry and no sample taken. (See Exh. 44, p. 30; Exh. 61, p. 2). Additionally, the Division's Chain of Custody Record listed a sample taken from OW3 but not for OW1. (Exh. 44, p. 38).

Based on the above timetable, Ms. Seyffert would have departed the site, located on Route 2 in East Greenwich, probably around 2:30 p.m. and perhaps later. She arrived at

the Department of Health laboratory in Providence and had the forms stamped in at 2:44 p.m. (Exh. 44, pp. 28-37). Clearly this presents a tight time frame and raises questions as to whether the last well sampling was rushed or whether her field notes were accurate.

Though the forms submitted to the Department of Health (DOH) requested that the water collected be treated as legal samples, and thus have chain of custody tags, the DOH laboratory neither stored the October 1990 samples in a locked refrigerator nor provided the legal tags. (T4-89; Exh. 44, pp. 28-37; T3-62, 83). Maurice Lynch, a chemist at the DOH laboratory, testified that the above would have been their normal procedure but was not followed in this instance.

The purpose of the chain of custody rule is to assure the integrity of the evidence; that is, to prevent the evidence from being tampered with or from being lost. Schwab v. Galuszka, 463 So.2d 737 (La. App. 4th Cir.), writ denied, 464 So.2d 1386 (La), cert. denied, 474 U.S. 803, 106 S. Ct. 37, (1985). A twenty-four hour vigilance of the evidence is not required, at least in a civil case. Evans v. Olinde, 609 So.2d 299, 304 (La. App. 3rd Cir., 1992). While there was testimony that unknown others could have had access to the refrigerator (T3-84), there was no evidence that the samples were tampered with while in DOH custody. Yet the problems with the record-keeping of the samples when collected seemed

to follow even as they were dropped off at the laboratory for analysis.

B. THE FEBRUARY SAMPLING

Monitoring wells EA1, EA2, EA3, EA4, EA5, EA6, E2, OW1, and OW2 were sampled by David Sheldon and Bruce Catterall on February 8, 1991. (T2-62-63). There was much less testimony about the events which occurred on site February 8th than there was with the October sampling.

Testimony largely focused on three points: that monitoring wells OW1, OW2, and E2 all had constituents of gasoline present and had a gas odor when sampled (T2-81); that the samples all contained sediment and dirt (T3-71); and that when the test results were first furnished to the Division, the sampling points were misidentified and the DOH later forwarded corrected copies. (T3-17-28).

While Maurice Lynch testified that the samples should have been filtered in the field to prevent sediment "contamination", he spoke as a chemist and not as one with any training in monitoring well sampling or knowledge of general environmental or engineering protocols. (T3-89). Based on Stewart Mountain's explanation of EPA protocol when volatile organics are suspected (T5-49-50), I am satisfied that sediment in the groundwater samples was a naturally occurring event and not an indication of any sloppiness in sampling.

C. TEST RESULTS

Set forth below are the results of the two sampling events of October 1990 and February 1991. The data is compiled from the testimony of David Sheldon and Stewart Mountain, Exhibit 61 (Gabrielle Seyffert's field notes), and Exhibit 44 (DEM Analytical Data). The wells are listed in the sequence Ms. Seyffert tested them in order to better illustrate the time spent on each one.

EA6

10/23/90	Start time: 10:30 a.m. Sampling indicates presence of gasoline.
2/8/91	No contamination indicated.

EA5

10/23/90	Start time: 11:15 a.m. Elevated levels of MTBE detected (methyl butyl ether is a gasoline additive).
2/8/91	No contamination indicated.

EA3

10/23/90	Start time: 11:40 a.m.
2/8/91	No contamination indicated.

EA2

10/23/90	Start time: 12:15 p.m.
2/8/91	No contamination indicated.

EA1

10/23/90	Start time: 12:30 (perhaps 12:35)p.m. Sampling indicates presence of gasoline.
2/8/91	No contamination indicated.

EA4

10/23/90	Start time: 12:55 p.m. Sampling indicates presence of gasoline.
2/8/91	Sampling indicates presence of some constituents of gasoline, particularly xylene.

OW3

10/23/90	Start time: 1:30 p.m. Well was dry. No sample taken.

OW2

10/23/90	Start time: 1:45 p.m. Sampling indicates significant presence of gasoline, also shows MTBE presence.
2/8/91	Sampling indicates presence of gasoline constituents.

OW1

10/23/90	Start time: 2:00 p.m. Sampling indicates presence of high levels of gasoline. Division's Chain of Custody form shows no sample from OW1.
2/8/91	Sampling indicates presence of gasoline constituents.

E2

10/23/90	Start time: 2:11 p.m. Sampling indicates presence of high levels of gasoline.
2/8/91	Sampling indicates presence of gasoline constituents.

E1

10/23/90	No sample taken.
2/8/91	No testimony located.

It is noted that the above may be an incomplete summary of the test results. It is, however, drawn from the testimony of the witnesses and is not this hearing officer's independent analysis of the test results.

D. THE EXPERTS

Based on the above results, the expert witnesses testifying on behalf of the Division concluded that

Respondent's leaking underground storage tanks were the source of groundwater contamination. Though I qualified Respondent's witness Paul Shea as an expert in hydrology whose testimony would aid the trier of fact, I did not give his analysis the same weight as Division's witnesses. His education, experience, and previous qualification as an expert witness was often only tangentially related to hydrology or hydrogeology, usually with supervision, and he had been offered as an expert witness in this field on few occasions. I particularly note that he has investigated only one other gasoline spill and in that case performed the soil test. (T8-45).

Through Mr. Shea's testimony, Attorney Violet raised specters of other possible sources of contamination from a fuel distribution truck seen on the north side of the station which had gasoline stains beneath it, to the Gulf Station north of the Mobil station which had three (3) USTs, the Town & Country parcel to the west which had another UST, as well as the Town & Country lot being used as a parking area, Route 4's location 60 feet above and west of the site with the terrain sloping towards the station, undiscovered or unknown USTs, and the speculative illegal dumping of gasoline. Earlier in the hearing, Ms. Violet, through her questioning of witnesses, had also suggested as possible sources the degreasers at Richard's Pub, possible underground drainage for the mechanic's bays at

the various gasoline stations, and the existence of oil-based asphalt and bituminous concrete as the parking surface in much of the area.

While I do not discount all of the above as plausible sources for some contamination, there is no evidence that they were the cause of the plume and test readings.

Additionally, the Division provided exhibits that other known USTs in the vicinity had been tested for tightness and were eliminated as possible sources of contamination. David Sheldon's testimony indicated, however, that there were underground tanks with gasoline in them that the Division was unaware of: "Absolutely", he said. (T3-161).

Stewart Mountain, a professional engineer and geologist employed by EA Engineering who testified on behalf of the Division, was the project engineer for the report generated by EA. (Exh. 45). Yet, there were certain conclusions set forth in the report with which he could not agree to a reasonable degree of scientific certainty. Further, the report had its limitations, particularly because of financial considerations. As set forth on page 12 of Appendix G, Exhibit 45, those elements not researched included the contents and uses of buildings proximal to the site, the location and nature of on and off-site underground fuel tanks and lines, and hydrogeologic assessments of groundwater flow and soil characteristics.

It was this latter element that Mr. Shea focused on in his testimony. His analysis was that the disturbance caused by the removal of the old tanks and installation of the new ones would temporarily elevate the water table and result in false readings. (T8-61). Further indications of an artificially high water table was that OW3, the monitoring well some distance away from the disturbed area, was a "dry" hole, that is, the groundwater level was considerably lower than in the disturbed tank grave area. (T8-22). His conclusion was that if the proper elevation was naturally lower prior to the disturbance, then any contamination in the groundwater flow system from the west would have flowed into the tank grave area and then across Route 2. (T8-24).

Mr. Mountain did not dispute Mr. Shea's analysis. He testified that the disturbance could have caused a perch in the water table and that it was possible the groundwater level was lower pre-disturbance. (T6-67,70). He also agreed that "off-site contamination from the west that could affect wells EA5 and EA6 was not thoroughly investigated" and, further, that he would have wanted to install a monitoring well west of EA5 and EA6. (T6-37). He agreed with Respondent's counsel that he had not been able to rule out, to a reasonable degree of scientific certainty, whether or not there could be contamination coming from the west onto the Mobil property. (T5-127). He speculated that the presence of an elevated

level of MTBE in EA5 might be indicative of a leading edge of a gasoline plume. (T6-39).

Despite his concerns about possible gasoline contamination to the west, Mr. Mountain still concluded that there had been a leak within ten (10) feet of the tank grave. (T6-77). This conclusion was based on the existence of floating product in the tank grave and the results of the groundwater sampling: "when one finds levels of 30,000 parts per billion, that is typically not the leading edge of the plume, that is at the source of the plume". (T6-76).

IV. MR. TASHIAN'S TESTIMONY

Karabit Tashian and his wife Souad Tashian purchased the property located at 3333 South County Trail, East Greenwich, RI on January 3, 1990. Having been granted intervenor status in this matter, Mr. Tashian chose to testify regarding his observations of the site. Due to Mr. Tashian's less than fluent ability with the English language, his daughter, Anoush N. Taraksain, assisted in some interpreting.

Mr. Tashian testified regarding the stockpiled soil and its treatment. Evidently, Kevin Doherty of Service Station Maintenance Corporation, the company hired by General Properties to remediate the soil, had been hosing down the pile on a regular basis until early 1991. At that time Mr. Doherty disconnected the hose but left it extended to the bioremediation area. (T7-70-71, 73-74). As late as June 13,

1991, the day Mr. Tashian testified, he stated that the pile still smelled of fuel. (T7-68).

Of particular significance was Mr. Tashian's testimony which raised the possibility of an ongoing leak on the site. He testified that in February-March 1990 he had two new pumps installed, increasing their number from four to six. Respondent's counsel, in cross-examination, elicited the following:

Q. You know, do you not, sir, that the distribution line to the pump is approximately buried three feet into the ground, isn't that so?
A. Maybe four feet he put a pump. I don't know. He's construction, he knows. I don't know.
Q. How about you, don't you know that distribution lines are laid three to four feet in the ground, because you've been in the business for 39 years?
A. Maybe four feet, maybe three feet, maybe something like this. Any area, he knows something else.
Q. You know it's roughly three to four feet, is that correct, sir?
A. Yes.
Q. And you noticed when those pumps were being put in, that when you look down approximately three feet, you think you saw gasoline, is that correct?
A. Yes. (T7-80-81).

Respondent's witness Paul Shea referred to this testimony when he speculated that there could be an ongoing leak within the distribution line from the tanks to the pumps. (T8-75). If such is the case, then it provides another explanation for the hydrocarbon readings for the samples taken in October 1990 and February 1991.

It should be noted that there was no evidence that the Division was aware of this possible source of contamination

prior to Mr. Tashian testifying.

V. BURDEN OF PROOF: PREPONDERANCE OF THE EVIDENCE

Some facets of this case are much more clear-cut than others and thus more persuasive. A review of pertinent provisions in McCormick on Evidence, 4th Ed., Vol. 2, presents the following explanation of what constitutes "preponderance of the evidence":

> The most acceptable meaning to be given to the expression, proof by a preponderance, seems to be proof which leads the jury to find that the existence of the contested fact is more probable than its non-existence. Thus the preponderance of evidence becomes the trier's belief in the preponderance of probability. Some courts have boldly accepted this view.
>
> Other courts have been shocked at the suggestion that a verdict, a truth-finding, should be based on nothing stronger than an estimate of probabilities. They require that the trier must have an "actual belief" in, or be "convinced of" the truth of the fact by this "preponderance of evidence". (footnotes omitted) at 439-440.

McCormick provides an example of the former view by quoting Livanovitch v. Livanovitch, 99 Vt. 327, 328, 131 A. 799 (1926) wherein "a bare preponderance is sufficient though the scales drop but a feather's weight". McCormick, p. 439 fn. 13. Rhode Island, however, seems to have adopted a position nearer the latter interpretation:

> A fair preponderance of the evidence is supposed to create in the mind of the trier of facts a conviction that the party, upon whom is the burden, has established its case, and not a mere suspicion that it has, however strong that suspicion may be. Jackson Furniture Co. v. Lieberman, 65 RI 224, 235 (1940).
>
> Accordingly, I have found that the Division has well met

its burden in some respects and not done so in others.

VI. CONCLUSION

A. SOIL CONTAMINATION

Attorney Violet stipulated that the soil removed from the tank grave was contaminated when it was removed in the spring of 1989. (T8-49). This is clearly supported by the record as well.

Accordingly, pursuant to the authority vested in the Director of the Department of Environmental Management through statute and regulation, Respondent is required to de-contaminate, treat, or re-mediate the soil. Respondent's proposal for in situ treatment (Exh. 26) has been approved by the Division and Respondent should proceed accordingly.

While Respondent contends that treatment has been completed, evidence elicited at the hearing supports a contrary conclusion. Mr. Tashian could smell the fuel even as late as the morning of the day he testified; Mr. Shea expressed his belief that there had not been any testing of the soil in the bioremediation area to determine its status. (T8-34).

Since time frames and deadlines may have to be adjusted in that plan previously approved by the Division, the AAD will retain jurisdiction through and until September 15, 1993 for the purpose of hearing motions to establish new time frames for completed remediation or, alternatively, for submission of

test results showing remediation has been achieved. The parties are, however, encouraged to agree on such time frames without the necessity of returning to this forum.

B. GROUNDWATER CONTAMINATION

There is substantial evidence on the record that at the time Respondent owned the property underground storage tanks failed precision tests, were removed and found to contain numerous holes. Free product was then observed floating on the water surface. Clearly, Respondent had leaking tanks in violation of regulatory requirements.

Pursuant to instruction from the Division, Respondent had the water and free product pumped out and thirteen (13) feet of soil removed from the graves. The Division maintains that these steps were insufficient, that further groundwater contamination had occurred which requires monitoring, testing, and remediation. The evidence presented was so flawed, however, that I cannot conclude as a matter of law that the Division has met its burden of proving through a preponderance of the evidence that groundwater contamination was caused by Respondent.

Division's witnesses Sheldon and Mountain based their expert opinions on groundwater samples obtained from monitoring wells on site and across Route 2 which had been tested at the DOH laboratory. Both the October 1990 and the February 1991 samplings occurred after the property was sold

to Mr. Tashian.

What particularly assailed the Division's case was the conflicting testimony of its witnesses David Sheldon and Gabrielle Seyffert regarding the October sampling event and the sloppy and inaccurate record keeping which followed.

Ms. Seyffert's testimony and field notes did not correspond with David Sheldon's testimony regarding his on-site times. On that October morning he observed her bail and sample EA6 then EA5 and testified that she did so correctly. He left the site at 10:30 a.m.. In contrast, Ms. Seyffert's notes indicate that she only began EA6 at 10:30 a.m. and moved on to EA5 at 11:15 a.m..

Mr. Sheldon also testified that he returned to the site between two and three o'clock and spent an hour bailing wells OW2, OW3 (the dry well) and E2. Yet Ms. Seyffert's field notes and the forms submitted to the DOH indicate that she must have left the site with the samples around 2:30 p.m. This latter discrepancy might be explained if Sheldon erred in his timetable and actually arrived on site closer to 1:30 p.m.

While there was much less testimony about the February sampling event, sufficient doubt has been introduced as to the reliability and integrity of specific samples that all have fallen under a cloud. Notations were made by one individual reflecting another's observations and noted incorrectly (gas odor noted for wrong well, T6-22); forms were prepared and

submitted to DOH for a nonexistent sample; monitoring wells were somewhat casually identified (for instance, in the February sampling, the Sample Submission Form identified "Mon. Well #1 (one)"--EA1, OW1, or E1?--Exh. 44, p.6); the Division's Chain of Custody form failed to show a sample from monitoring well OW1 though one was submitted to the DOH laboratory; the DOH failed to provide legal tags for the October sampling despite the request that it be treated as a legal sample; the February test results were originally misidentified by the DOH and had to be corrected; the rapidity in which the last samples were taken in October (OW3-the dry well-was completed in fifteen (15) minutes; OW2 in fifteen; OW1 in eleven minutes; and E1 or E2 started at 2:11 p.m., completed, bailers washed, van packed and driven to Providence to have forms stamped at DOH at 2:44 p.m.); and the person who drew the last sample in October 1990 could not read her own writing and identify whether it was monitoring well E1 or E2.

Individually, no doubt each of the above could be dismissed as an insubstantial error. Their impact as a whole, however, means that if samples were mixed up or improperly drawn, then the plume would come from a difference angle and not be attributed to Respondent. Lack of further testing west of the site would then take on even greater significance since there was clear evidence of gasoline constituents or additives in monitoring wells EA5 and EA6. And there was Mr. Tashian's

testimony as well, which may indicate a more recent source of contamination than Respondent's removed tanks.

C. BURDEN OF PROOF

An additional problem with the presentation of the Division's case appears to have resulted from the Superior Court determining that the immediate compliance order should be treated as a notice of violation for which a timely request for hearing had been made. Once an NOV is properly before this forum, the "Order" portion becomes the relief sought by the Division--in the nature of a proposed Order. Yet the attorneys for the Division and Respondent presented testimony and argued as to compliance/noncompliance with the various paragraphs of the Order.

Though this confusion did not permeate the hearing, it was apparent in the Division's closing arguments and may have affected its perception of the burden of proof:

> Until the reports come in that DEM requested in its compliance order and until those reports show that General Properties is not responsible for that gasoline contamination that existed at the site, the director continues to have reasonable cause to believe that a violation has occurred, and the director's jurisdiction to issue this order and to continue this order...(T8-88-89).

It is not an appropriate argument that if Respondent had complied with the proposed order then the Division would have been better able to sustain its burden to prove the source of the leak.

Wherefore, after considering the testimony and documentary evidence of record, I make the following:

FINDINGS OF FACT

1. The Compliance Order dated March 27, 1990 is deemed to be a notice of violation (NOV) pursuant to R.I.G.L. Section 42-17.1-2(u) to which Respondent filed a timely request for hearing.

2. General Properties, Inc., a Rhode Island corporation is substituted as Respondent for Elvira Petteruti, d/b/a General Properties.

3. An underground storage tank (UST) facility, known as Sun Valley Mobil and located at 3333 South County Trail, East Greenwich, was registered with the DEM UST program in 1985.

4. The Sun Valley Mobil site was owned by General Properties, Inc., ("GPI") a Rhode Island corporation of which Elvira Petteruti was President from some time prior to the effective date of the UST regulations (May 1985) until January 1990.

5. Pursuant to a sales agreement, GPI sold the Sun Valley site to Mr. Karabet Tashian on January 3, 1990.

6. Mr. Karabet Tashian was granted intervention status in this administrative proceeding.

7. Prior to June of 1989, the site contained five USTs which stored diesel fuel and gasoline.

8. On April 14, 1989, the DEM Groundwater Section was

advised by a DEM-registered precision testing company, that USTs at the site had failed precision (tightness) tests.

9. The reported leaking tanks were emptied of their product shortly thereafter.

10. The site owner arranged for the removal of four USTs on June 1 and 6, 1989. During inspections of the removal work, DEM personnel observed that, a) all four tanks contained holes, b) contaminated soil was present in the area from which the USTs were excavated, c) free product was witnessed in the tank grave (excavation pit) and subsequently removed.

11. The holes in the tank ranged in size from a pencil to a dime.

12. That thirteen (13) feet or approximately 125 cubic yards of contaminated soil was excavated and stockpiled on and covered with plastic sheeting.

13. A site assessment report, prepared by Service Station Maintenance Corporation, was submitted to DEM on August 29, 1989.

14. DEM approved an in-situ bioremediation plan for treatment of the contaminated soil at the site.

15. The soil treatment system was constructed in May and/or June of 1990.

16. Since June 1990, DEM has not received any written progress report on the soil treatment project nor has DEM received copies of any analytical data pertaining to the

quality of the soils.

17. The direction of groundwater flow was generally west to east across the site; and east to southeast away from the site.

18. The Sun Valley site is adjacent to a Cumberland Farms UST facility: Cumberland Farms operates a gasoline station/mini-mart utilizing fiberglass reinforced tanks which were installed in 1982. A precision test of these tanks and associated lines indicated the tank system was tight in 1990.

19. The site is also adjacent to a UST facility which contains a metal tank used to store diesel fuel. Precision test results from 1986, 1987 and 1989 indicated this tank was tight.

20. DEM retained a technical consultant (EA) to conduct additional subsurface investigation activities at the Sun Valley Mobil Site in late 1990. EA supervised the installation of six additional groundwater monitoring wells in September 1990. These wells, as well as existing wells, were sampled in October 1990 and February 1991.

21. Groundwater monitoring samples, including those containing sediment, indicate the presence of hydrocarbons in the monitoring wells.

Based on the foregoing facts and the documentary and testimonial evidence of record, I make the following:

CONCLUSIONS OF LAW

1. All hearings were held and conducted in accordance with the Rhode Island General Laws, the Administrative Rules of Practice and Procedure for the Department of Environmental Management, Administrative Adjudication Division for Environmental Matters and the Oil Pollution Control Regulations.

2. The Department of Environmental Management has jurisdiction over this matter.

3. This matter is properly before the Administrative Adjudication Division.

4. Notice of Pre-Hearing Conference and Hearing was prepared in substantial compliance with Chapter 17.7 of Title 42 of the Rhode Island General Laws.

5. Adjudicatory Hearings were held on May 20, 1991, May 22, 1991, May 23, 1991, May 24, 1991, June 7, 1991, June 10, 1991, June 13, 1991 and July 17, 1991.

6. The Clean Water Act, and the regulations promulgated pursuant thereto, authorize the Director to issue orders to prevent and abate the discharge of pollutants to the waters of the State.

7. The Director is authorized, and through the Oil Pollution Control Regulations specifically requires the person discharging a pollutant to Rhode Island waters to monitor, remediate, and clean-up the state's resources impacted by the

discharge.

8. The Division of Groundwater and Freshwater Wetlands bore the burden to prove by preponderance of the evidence that GPI discharged a pollutant to the waters of the state without a permit.

9. The Division has proved through a preponderance of the evidence that free product was discharged into the water and observed floating on the surface following excavation of Respondent's USTs.

10. The Division has proved through a preponderance of the evidence that such discharge caused contamination of the soil surrounding the tank graves.

11. The Division has failed to prove through a preponderance of the evidence that despite pumping out the free product and removal of thirteen (13) feet of soil around the tank graves, Respondent caused a discharge of pollutants into the groundwater of this State.

Wherefore, it is hereby

ORDERED

1. Respondent shall complete the remediation of the excavated soil according to the plan previously approved by the Division and shall submit semi-monthly reports to the DEM during treatment of the contaminated soil, describing the actions taken and reporting all data collected during the process.

2. Upon completed remediation, Respondent shall submit test results as required by the Division of Groundwater and ISDS or UST Program to substantiate that remediation has been achieved.

3. As time frames and deadlines may have to be adjusted in that plan previously approved by the Division, the AAD will retain jurisdiction through and until September 15, 1993 for the purpose of hearing motions to establish new time frames for completed remediation or, alternatively, for submission of test results showing remediation has been achieved.

4. The remainder of that Compliance Order dated March 27, 1990, now a notice of violation, is herewith DISMISSED.

I hereby recommend the foregoing Decision and Order to the Director for issuance as a final agency order.

Entered as an Administrative Order this 7th day of July 1993.

Mary F McMahon

Mary F. McMahon
Hearing Officer
Dept. of Environmental Management
Administrative Adjudication Division
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