

STATE OF VERMONT

SUPERIOR COURT
Vermont Unit

ENVIRONMENTAL DIVISION
Docket No. 139-10-13 Vtec

Washington Unit

CIVIL DIVISION
Docket No. 307-5-06 Wncv

Bradford Oil Property 'CAP'

State of Vermont,

v.

Bradford Oil Company, Inc.

DECISION ON THE MERITS

Bradford Oil Company (Bradford) appeals the “Final Corrective Action Plan” (the CAP) issued by the Agency of Natural Resources (ANR or the Agency) relating to environmental contamination on Bradford’s property in the Town of Springfield, Vermont. The Springfield Regional Development Corporation (SRDC), the owner of property located across Clinton Street from Bradford’s property and affected by the CAP, also challenged the CAP in a cross-appeal. SRDC and ANR entered into a Stipulation on May 20, 2014 that provided for dismissal of SRDC’s appeal.

In a related civil enforcement matter, Bradford was found liable under 10 V.S.A. § 6615 for the contamination. State v. Bradford Oil Co., No. 307-5-06 Wncv, slip op at 6–7 (Vt. Super. Ct. Oct. 25, 2012) (Teachout, J.), available at <https://www.vermontjudiciary.org/20112015%20Tcdecisioncvl/2012-10-26-5.pdf>. The only remaining issue in that case is the court’s determination of the appropriate remedy—namely, whether the CAP should be adopted as the injunctive remedy. The civil matter has been specially assigned to the undersigned in order to coordinate a fair and efficient resolution of both CAP appeals and the remedy determination in the civil matter.

In advance of the merits hearing, on June 3, 2014, the parties and the Court performed a site visit. Appearing at the site visit and merits hearing were Attorneys George McNaughton for Cross-Appellant SRDC, W. Scott Fewell and N. Joseph Wonderly for Appellant Bradford Oil Company, Mark J. DiStefano and Kyle H. Landis-Marinello for the State of Vermont Agency of Natural Resources, and Stephen S. Ankuda for the Town of Springfield.

Based upon the evidence presented at trial, including that which was put into context by the site visit, the Court renders the following Findings of Fact.

Findings of Fact

1. The property at issue in the related matters is the former Springfield Manufactured Gas Plant located at 197 Clinton Street, Springfield, Vermont (MGP Site or the Site) which is now owned by Bradford Oil Company.
2. The Site is less than 1.5 acres in size.
3. The Site operated from approximately 1906 to 1951 as a Manufactured Gas Plant (MGP). An MGP is an industrial facility where gas is produced from coal, oil, and other feedstocks. Gas was produced and stored at the Site and then piped to the surrounding area where it was used for lighting, cooking, and heating.
4. Many Vermont towns had an MGP plant at one time.
5. Coal tar, coal oil byproducts, and other byproducts of the manufacturing process were commonly stored at MGP sites.
6. The MGP Site lies immediately to the west of Clinton Street. Across from the MGP Site and to the east of Clinton Street lies the former Jones and Lamson (J&L) site, currently owned by SRDC.
7. The J&L site is bordered to the east by the Black River, which is approximately 500 feet east of and generally down-gradient from the MGP Site.
8. SRDC intends to redevelop the J&L site although no specific plan was presented to the Court.
9. After its use as an MGP, the Site was operated as a propane plant through the 1980s.
10. None of the original MGP above-ground structures still exist at the Site.

11. Bradford purchased the Site in 1997 and in 1998 demolished all the buildings to re-develop the Site as a gasoline station and convenience store.
12. During the Site work in 1998, Site soils were excavated and deposited off-site. An environmental enforcement officer (EEO) observed the activity and noticed the smell of coal or oil within the soils.
13. Bradford was ordered by the Department of Environmental Conservation (DEC) Waste Management Division, within the Agency of Natural Resources (ANR), to investigate on-site contamination.
14. Bradford retained Marin Environmental to perform a Site investigation, including sampling and analysis. The investigation, which began in the late 1990s and continued until more recently, showed elevated contaminate levels on-site, specifically volatile organic compounds (VOCs) and polynuclear aromatic hydrocarbons (PAHs).
15. During Site investigations, subsurface structures were uncovered such as concrete walls, concrete vaults, piping, and underground storage tanks. These features had coal tar contaminate materials in and around them.
16. It is difficult to fully remove coal tar contamination, especially when the contamination is in and around subsurface structures.
17. During Bradford's redevelopment of the Site, the subsurface structures were removed to the extent possible. Some structures and piping were left in place.
18. Soil and groundwater samples from the J&L site identified coal tar and coal oil contamination that is likely to have migrated from the MGP site.
19. In approximately 2005, Bradford informed the ANR that it was not going to undertake further investigation or environmental monitoring of the Site or surrounding area.
20. ANR contracted with the Johnson Company to undertake further environmental investigation of the Site and surrounding area.
21. The Johnson Company initiated its investigation in the fall of 2007. This investigation included soil sampling, ground water monitoring, sample analysis, and a fate and transport analysis.

22. As part of its investigation, the Johnson Company considered possible migration pathways from the MGP Site and whether the contamination detected on the J&L site was migrating from the MGP Site.
23. ANR paid the Johnson Company a total of \$38,227 for its work in 2007 and 2008.
24. Marin underwent some corporate changes and became Environmental Compliance Services, Inc. (ECS). ECS completed further environmental investigations of the Site for Bradford in 2006 and 2009.
25. Both the Johnson Company and ECS concluded that contamination is migrating from the MGP Site to the J&L site.
26. This contamination includes: Light Non Aqueous Phase Liquids (LNAPLs), Dense Non Aqueous Phase Liquids (DNAPLs), and dissolved volatile and semi-volatile organic compounds as well as sorbed contamination and possible gas phase contamination in the subsurface.
27. Sometime around 2011, Bradford retained Key Environmental, Inc. to conduct additional analysis of the environmental data collected to date and to complete some limited site investigation.
28. The purpose of Key Environmental's site work was to identify additional subsurface anomalies such as previously unidentified pipes or structures.
29. Based upon all the data collected to date, all parties' environmental consultants agree that there is MGP contamination, including LNAPLs, DNAPLs, and dissolved phase contaminants, at both the MGP Site and the J&L site. Non Aqueous Phase Liquids (NAPLs) are difficult to sample and analyze because the material muddles up laboratory equipment used to test levels of contamination. Thus, if NAPL is detected, the material is typically not analyzed for contaminate levels, however the amount of NAPL is generally noted. These data points, indicating the location and amount of NAPL are used to determine NAPL migration.
30. The contaminants at issue in these matters, including coal tar related DNAPLs, are of a very persistent nature.
31. NAPLs do not dissolve easily in water. Over time, however, NAPLs will slowly dissolve in water creating a dissolved phase contaminate plume. DNAPLs are unpredictable and

degrade over long time periods, making it difficult to forecast when groundwater contaminate concentrations will comply with regulatory standards.

32. The parties' experts agree that it is likely that MGP contaminates, especially naphthalene, a volatile organic compound, will continue to exceed the Vermont Groundwater Enforcement Standards (VGES) of 20 parts per billion (ppb) for more than 30 years.

33. Bradford and its consultants generated three (3) Corrective Action Feasibility Investigation Reports (CAFIs).

34. Several options were considered by ANR and Bradford for Site remediation, including contaminate removal by excavation and disposal off-site, extraction and treatment of groundwater, injection of bioremediation measures, soil flushing, containment and remediation, and combinations of these procedures.

35. The costs of these alternative remedial programs are estimated between \$65,000 and \$2,400,000.

36. Because the MGP Site is immediately adjacent to Clinton Street, a major roadway in Springfield, remedial efforts disrupting traffic on Clinton Street would have a negative effect on the local economy.

37. Installation of containment devices has questionable effectiveness and may actually result in adverse effects as disturbing the ground in the area could alter the geological conditions and cause the contamination to move.

38. The groundwater table in the area is approximately 12 feet below ground surface.

39. Groundwater in the area flows generally in an easterly direction toward the Black River. Flow is generally restricted to a geologic channel that flows in a northeasterly direction from the MGP Site across Clinton Street and in a southeasterly direction from the J&L site toward the Black River.

40. The dissolved phase NAPL contamination flows in a plume through this channel as the channel is the preferential pathway.

41. Because DNAPL is heavier than water, it does not always follow groundwater flow. Rather DNAPL will migrate down until it reaches a layer of earth that it cannot penetrate, such as clay or rock. It will then follow these geologic formations, displacing the groundwater

therein. DNAPL therefore flows toward and into geologic depressions or sinks where it will accumulate and collect until it spills over the edges of the sinks.

42. A dense clay geologic layer underneath the MGP Site, Clinton Street, and the J&L Site acts as a floor upon which DNAPL travels.

43. Some contaminants have migrated into low permeability materials, such as silts and clays, making it difficult to remediate and causing ongoing contamination for decades.

44. The J&L property has its own on-site contamination, likely from former on-site tooling activities. These contaminants include petroleum, PCBs, chlorinated solvents, and metals.

45. Napthalene contamination is present on both the MGP and J&L sites.

46. Both LNAPL and DNAPL contamination are present on the MGP and J&L sites.

47. Contaminates originating from both sites may have intermingled on the downgradient J&L property.

48. Site investigation and sampling efforts to date have been fragmented and separated by large periods of time. This limits the ability to understand past and present subsurface contamination and migration and the ability to predict future trends.

49. To better monitor contamination, all monitoring wells should be sampled on the same day(s). This will provide better data to predict groundwater flow and contaminate movement.

50. Based upon data collected to date, it cannot be concluded that DNAPL is in dynamic equilibrium. This means DNAPL contamination and its migration remains unpredictable.

51. MGP contaminants have migrated onto the J&L site and are present in excess of the VGES.

52. Investigation and sampling to date has generated little information regarding environmental conditions under Clinton Street.

53. New development, demolition and re-building, or heavy equipment driving on the sites could impact migration of DNAPL and dissolved phase contamination. This is because the DNAPL contamination is not very deep below the ground surface. Thus, excavation and heavy construction or deconstruction activities can mobilize DNAPL that is otherwise not mobile.

54. Redevelopment of the MGP and J&L sites raises concerns of mobilizing contamination, altering contaminate migration direction, and creating the need for special handling of any excavated materials.
55. Reconstruction of Clinton Street in the area of the MGP Site is likely at some future date. Servicing and replacing underground utilities in this area is also likely at some future date.
56. DEC's Investigation and Remediation of Contaminated Properties Procedure Section 4.1 states that when it is demonstrated that remediation is not feasible, or that it will not remediate a site any faster than natural attenuation, the Waste Management Division Site Management Section (SMS) may allow long term monitoring of natural attenuation instead of active remediation, provided that public health and the environment are protected.
57. All parties agree that active remediation is not feasible.
58. The chosen remedy for the site as set forth in ANR's CAP is based upon ANR's Investigation and Remediation of Contaminated Properties Procedure (IROC).
59. ANR's CAP includes land use restrictions and long term monitoring of natural attenuation of contaminants. The land use restrictions include reclassification of groundwater in the area affected, implementation and recording of deed restrictions in the land records to prevent contact with contaminated media by subsurface construction or utility work, and vapor intrusion into buildings overlying the area of contamination. These actions will mitigate the risks to public health or the environment and allow natural attenuation to degrade the contaminant mass while the contamination is monitored.
60. The Black River is a sensitive receptor. As of the time of the last sampling in 2009, there was no indication that MGP contamination had or was impacting the Black River. There has not been sufficient sampling and data collection to date to predict whether MGP contamination will reach the Black River.
61. Contaminate contact with humans is also a sensitive receptor.
62. Sampling frequency under the CAP is quarterly for the first two years, semi-annually in years 3 and 4, and annually in year 5 and thereafter.
63. Contaminates of concern are so persistent and degrade so slowly that monitoring may be required for 25 years or more.

64. Quarterly sampling in years 1 and 2 is necessary to generate baseline data as no sampling has occurred since 2009.
65. Groundwater samples are analyzed for the contaminants of concern. If, however, NAPL (free product) is encountered in a well, then the thickness of the NAPL will be measured and no analysis performed.
66. The long term monitoring plan does allow for proposals to decrease the number of wells being sampled and/or decreasing the sampling frequency after year 4. Such proposal may be made every 5 years.
67. Sample analysis 8260 detects all volatile organic compounds, including naphthalene and chlorinated solvents. Sample analysis 8015 does not detect chlorinated solvents.
68. Naphthalene is common to both the MGP and J&L sites, whereas chlorinated solvents are only found in J&L site contamination.
69. Monitoring well NW-4 is located on the eastern side of the J&L site close to the Black River. This well is intended to monitor for any contamination migrating to the Black River. Site specific contamination from both the MGP and J&L sites could migrate from each site toward the Black River and be detected in this well.
70. As part of the groundwater monitoring program there are three sentinel wells; MW-04-14, MW-04-16 and NW-4. These wells are clean, meaning they have yet to detect any contamination from the MGP site.
71. As set forth in ANR's CAP, the estimated cost for each groundwater monitoring well to be installed and monitored over a 30 year period is approximately \$50,000. This includes installation, sampling and analysis, and reporting.
72. Prior to the coordinated merits hearing, ANR and SRCD filed a stipulation regarding the Environmental Division appeal and the Civil Division enforcement action. This Stipulation relocated NW-04 to a nearby location to accommodate SRDC's redevelopment interests and specifies deed restrictions for a portion of SRDC's property.
73. The deed restrictions within the CAP relate to a portion of SRDC's property, a section of Clinton Street impacted by MGP contamination, and the entire MGP Site. The restrictions do not prohibit development or construction activity, but rather prevent the installation of

drinking water wells, require appropriate precautions to protect human health during excavation or other subsurface work, and require appropriate precautions to ensure against vapor intrusion from the subsurface contaminate plume into overlying buildings.

74. The CAP further requires Bradford to petition to reclassify affected groundwater from Class III to Class IV.

Conclusions of Law

The parties' environmental consultants provided opinions as to the scope of contamination at the MGP Site and the suggested remedial measures. These opinions were all similar in concept, however, they differed as to the number and placement of wells and the duration for sampling and monitoring. While the environmental consultants have slightly differing opinions as to NAPL and dissolved phase contamination sources and how the contamination is migrating, they all agree that MGP contamination has migrated to the J&L site. Furthermore, they all agree that sampling to date has been too sporadic and the resulting data insufficient to know whether the contamination is stable and in a state of dynamic equilibrium. Thus, additional sampling and analytical data is necessary to better understand the extent of the contamination and to predict how the MGP contamination may migrate in the future, any natural attenuation of the contaminate plume, and any possible effect on sensitive receptors.

Based upon the evidence, we conclude that NAPL and dissolved phase contamination in groundwater on the MGP and J&L sites poses a threat to public health from contact or ingestion and that the sites will remain contaminated for the foreseeable future. Furthermore, NAPL fate and transport is complex and there is insufficient data to date to know whether contaminate levels are stable and in equilibrium. Lastly, we conclude that because the Black River is a sensitive receptor located groundwater downgradient from the contamination, monitoring is appropriate to ensure the contamination does not threaten the river. While Bradford's environmental consultant opined that it is not possible for MGP contamination to reach or impact the Black River, we conclude that this opinion is not supported with sufficient scientific data.

Deference

We first address arguments from both ANR and Bradford regarding what degree of deference is to be afforded to ANR in determining the appropriateness of the CAP and the remedy in the Civil Enforcement matter. As a general rule, Courts defer to an agency's interpretation of its own regulations. In re ANR Permits in Lowell Mountain Wind Project, 2014 VT 50, ¶ 17. Deference is inappropriate, however, where the proposed interpretation would result in unjust, unreasonable, or absurd consequences. In re Verburg, 159 Vt. 161, 165 (1992). Furthermore, no deference is given to agency litigation positions that are wholly unsupported by regulations, rulings, or administrative practices. Bowen v. Georgetown Univ. Hosp., 488 U.S. 204, 212–13 (1988). These principals are equally applicable whether the matter is a de novo appeal of agency action or a civil enforcement action.

In a de novo appeal, the ultimate decision appealed (here the CAP) is not entitled to deference per se, but the Agency's prior regulatory interpretations may be. Lowell Mountain Wind Project, 2014 VT 50, ¶ 11 (noting that with a de novo statutory review no deference is owed to the "permit decision" on appeal but deference is given to agency interpretation of regulations and statutes it implements within its area of expertise). Thus, this Court will not defer to ANR's CAP. We will, however, defer to ANR's technical guidance documents. The Agency has established procedures for the remediation of contaminated properties within a document entitled "Investigation and Remediation of Contaminated Properties Procedure" (IROC) admitted at trial as exhibit ANR-4. The IROC is a technical guidance document which interprets the Agency's regulatory authority and process as it relates to the remediation of contaminated properties. The IROC is thus entitled to deference from the Court. The parties dispute whether we must give deference to the CAP itself. As noted above, in a de novo appeal before the Environmental Division, it would be improper to give deference to the CAP. Whether, in the context of the civil enforcement action some degree of deference is owed to the CAP as an Agency decision made within its area of expertise is a question we need not answer because whether we defer to the CAP or not we reach the same result based on the provisions of Title 10 Chapter 159 and the IROC.

The Corrective Action Plan

The parties and their experts generally agree on the overall remedial approach outlined within ANR's revised CAP dated September 26, 2013 and last revised on May 12, 2014. We therefore conclude that the requirements of the revised CAP, Exhibit ANR-17B and as further depicted on Exhibit ANR 35, are necessary and reasonable and in accord with the IROC. (See IROC, Ex. ANR-4 at 31–32 (describing use of long-term monitoring as an acceptable site management technique)). Where noted below, however, we require certain modifications to the revised CAP to reflect the agreement of the parties at trial, or the evidence presented through the parties expert witnesses.

As noted above, the CAP includes two main elements: land use restrictions and long-term monitoring. First, the land use restrictions and Bradford's obligation to pursue reclassification of groundwater as described and set forth in Exhibit ANR-17B, Section 4.2.1 are reasonable and necessary based on the evidence presented at trial and the procedures in the IROC. (See IROC, Ex. ANR-4 at 34–36). Bradford shall provide ANR with separate proposed deed restrictions within 60 days of this Order for the entire Site and the impacted portion of Clinton Street. The Town shall cooperate in good faith with Bradford in developing the deed restriction for Clinton Street. SRDC has agreed to the deed restrictions for the J&L property. (See ANR and SRDC Stipulation). Furthermore, within 60 days of this Order, Bradford shall provide ANR with a draft petition to reclassify groundwater from Class III to Class IV as required by the CAP.

With respect to the CAP's long term monitoring program, Bradford asserts that fewer wells are required and challenges whether monitoring must continue until contamination levels fall below enforcement standards. SRDC does not challenge the number of wells required under the revised CAP, however, SRDC asserts that increased sampling frequency and a few years of sampling and data collection are necessary to determine whether the MGP contamination is in a steady state or migrating. According to the IROC the purposes of the long term monitoring program are:

- To identify time variant trends in environmental conditions and/or in the operation of remedial systems.

- To understand environmental conditions and tracking the fate and transport and/or attenuation of contamination.

To determine if and when action must be taken to further control the release, reduce risks to receptors, improve remedial system performance, conduct further site investigation, or discontinue corrective actions.

To determine when site management activity completed status is appropriate.

(IROC, Ex. ANR-4 at 32). Thus, each proposed monitoring well will be included in the program so long as it is in furtherance of these purposes. For the majority of the monitoring wells ANR, Bradford, and SRDC are in agreement that the inclusion of the wells in the monitoring program is necessary to meet the purposes described in the IROC.

Bradford, however, objects to specific monitoring wells as follows. Bradford asserts that monitoring well JL-101, the northerly most well on the J&L property, should be relocated to a nearby southeasterly location as shown by pink highlight on Exhibit ANR-35. Bradford offers that this relocated position would be a better location to monitor for contamination migrating toward the Black River and that if placed in this location, JL-101 would obviate the need for well NW-4. Bradford is opposed to NW-4 because of its concern that if contamination is detected within this well, it may not be possible to determine its source as originating from the MGP Site or J&L site.

Bradford also objects to NW-04-14, a sentinel well¹, arguing it is too far removed from MGP contamination and will not act as an early warning well. Furthermore, Bradford is concerned about the possibility of residual contamination from a 70,000 gallon UST tank formerly on the J&L site located by the chip shed, which at one time contained petroleum products. Thus, Bradford argues that if contamination is shown in the well, it will be difficult to know whether it is from the MGP Site, for which it is responsible, or the J&L site, which it arguably is not. Lastly, NW-04-14 would be expensive to install and sample and therefore does not meet CAP guidelines. As for sentinel well NW-04-16, Bradford advances the same concerns but argues that well NW-04-16 is located even closer to the location of the former chip shed, which would create a greater probability of residual contamination interfering with contamination readings.

¹ A sentinel well is a groundwater monitoring well situated between a sensitive receptor downgradient and the source of a contaminant plume upgradient. Contamination should be first detected in the sentinel well which serves as a warning that contamination may be moving closer to the receptor.

As we conclude above, there is insufficient data collected to date to confidently predict the migration of MGP contamination on or across Bradford's Site, Clinton Street, or the J&L property. No party argues that JL-101, NW-4, MW-04-14, or MW-04-16 will be unsuccessful in detecting contaminate migration to the north or toward the Black River, should that occur. Bradford's concerns go more to the possibility of non-MGP contamination being detected in a well. Based upon the expert's testimony, this concern can be addressed through additional sampling and expanded analyses of the samples. Absent a compelling reason to alter proposed monitoring well locations, we will honor SRDC's understanding and agreement with ANR on the placement of monitoring wells on its property, which apparently will minimize adverse impacts on SRDC's plans to redevelop its property. Based upon the evidence before the Court at this time, we find no compelling reason to alter monitoring well locations JL-101, NW-4, MW-04-14, or MW-04-16.

With respect to NW1 and NW2, expert testimony debated the need for both wells or whether a single well in this area would be sufficient. While ANR asserts that it prefers both wells, ANR also acknowledged that a single well at the NW1 location would be an acceptable alternative. The compelling testimony of both SRDC's and Bradford's experts affirmed that having two wells so near each other in this location was not necessary to further the purposes of the IROC, and that a single monitoring well would suffice. Thus, we will eliminate NW2.

When pressed at trial, ANR's expert witness agreed with the expert witnesses of Bradford and SRDC that the goals of the IROC and the CAP are met without inclusion of monitoring well NW-3. That well is therefore also eliminated from the monitoring program. As for MW-14, Bradford argues that it is outside the preferred pathway and useless, as opposed to ANR and SRDC's suggestion that it is a good location to identify the southern end of the contamination plume. Thus, we conclude that it is necessary and reasonable to keep MW-14.

Required Groundwater Monitoring Wells

The Court therefore concludes that ANR's well array consisting of the wells listed on pages 18 and 19 of the Revised CAP, Exhibit ANR-17B, and as depicted on Exhibit ANR 35, are necessary and reasonable with the following modifications:

1. Wells GMW-2, GMW-4, MW-10S, JL-103, JL-4, MW-12, MW-13, MW-14, MW-6, MW-9S, JL-101, MW-04-14, MW-04-16 remain as shown and described.
2. Wells NW-2 and NW-3 are eliminated.
3. NW-4 (NW-4S/4D) – Pursuant to the Stipulation between ANR and SRDC, this well is to be relocated to facilitate the potential redevelopment of the SRDC property. The new location is shown on Exhibit ANR-35. This well will consist of a nested shallow well (NW-4S) and a deep well (NW-4D). There is some concern that if contamination is detected within this well, it may not be possible to know whether its source is MGP or J&L site contamination. Both Bradford and SRDC are free to present evidence of the source of any such contamination in response to the sample analysis results. The most important determination, however, will be whether the potential exists that MGP contamination is migrating towards the Black River, and if it does, whether further steps are needed to protect that sensitive receptor.

Monitoring Frequency

The revised CAP sets forth an initial 5 year period for groundwater sampling and analysis. Specifically, quarterly sampling is required in the first two years to gather baseline data and to account for any seasonal fluctuations. Semi-annual sampling and analysis is required for the next two years followed by annual sampling in year 5. After year 5, the CAP requires annual sampling for the next 25 years. The CAP allows for Bradford to periodically request, based upon collected data, less frequent sampling and the elimination of wells from the sampling program. ANR selected the 30 year monitoring period because it is likely that MGP contaminates, especially naphthalene, will continue to exceed the VGES of 20 ppb for more than 30 years.

Bradford argues that because the MGP ceased operations in 1951, any release occurred long ago and even though environmental contamination is apparent, based upon sampling and data generated to date, the contamination plume is stable. Thus, Bradford argues that a 2 year quarterly monitoring program is sufficient to understand seasonal impacts and that statistical analysis can be used to predict long term stability. If this approach does not support contaminate stability, then Bradford agrees that longer term monitoring is appropriate.

SRDC agrees that without seasonal groundwater fluctuations, 2 years of quarterly sampling will likely be sufficient. If, however, there is seasonal fluctuation, SRDC argues that 8 years of quarterly monitoring may be required to understand contamination conditions.

As part of ANR's rebuttal, ANR agreed that quarterly sampling and analysis for the first 2 years would provide enough data for Bradford to make a formal request to modify the CAP (Section 4.2.2.6) to reduce the number of wells to be sampled in the future. According to ANR, Bradford would be required to continue semi-annual sampling, analysis, and reporting with sampling occurring in the late fall and late spring while ANR considers Bradford's request to modify the CAP. The parties propose that once Bradford files a request to modify the CAP, ANR must respond in writing within 30 days, and thereafter, Bradford would then have 30 days to reply to ANR's response.

We conclude that it is reasonable to require Bradford to perform quarterly sampling, analysis and reporting for the first 2 years and that based upon this data Bradford could then make a formal request to modify the CAP to reduce the number of wells to be sampled in the future. Bradford will be required to continue semi-annual sampling, analysis, and reporting, with sampling occurring in the late fall and late spring, while ANR considers Bradford's request to modify the CAP. Once Bradford files a request to modify the CAP, ANR must respond in writing within 30 days, and thereafter, Bradford will then have 30 days to reply to ANR's response. ANR must then issue a written decision on Bradford's request within 45 days; this decision will be appealable to this Court. The CAP is otherwise unmodified with respect to sampling frequency, reporting and requests for modification of the CAP.²

The CAP's long term groundwater monitoring program is based upon the hypothesis that the LNAPL, DNAPL, and dissolved phase contaminate plumes are in a state of dynamic equilibrium, meaning that NAPL accumulations are essentially stable. The data upon which this hypothesis is based are several years old, from different monitoring points and times, and thus insufficient. It is therefore necessary to collect more data on an ongoing basis to further analyze this hypothesis.

² Bradford summarily challenged the CAP's "three-tiered Approach" to the long term monitoring. Based upon the evidence before the Court, although this approach has not been previously utilized by ANR, it is consistent with the IROC and we have no specific evidence to support modification or elimination of this approach from the CAP.

Bradford requests an order that it may cease groundwater monitoring in the event there is sufficient data to demonstrate that contaminate levels are stable or declining. This request is, at this time, based upon hypothetical facts. We will not issue an advisory opinion based upon hypothetical facts. In re All Metals Recycling, Inc., No. 171-11-11 Vtec, slip op. at 8 n.5 (Vt. Super. Ct. Envtl. Div. Apr. 23, 2012) (Walsh, J.). While the monitoring program can be reviewed and adjusted over time, at this time it cannot be eliminated at some specific future date. Similarly, we leave ANR's assertion that monitoring must continue until enforcement standards are satisfied for future consideration once there is sufficient data to reliably predict the status and nature of contamination.

The IROC states that "long term monitoring is a sufficient method of managing a site until it established that the natural processes of dilution, dispersion, degradation, or other mechanism(s) will reduce contaminant concentrations to levels that no longer exceed applicable standards, and no longer are an unacceptable risk to sensitive receptors." (IROC, Ex. ANR-4 at 31). The use of land use controls, including the groundwater reclassification, is intended to eliminate any unacceptable risk to humans as sensitive receptors. Thus, with those controls in place and use of the groundwater prohibited, it is not clear that the VGES would still be "applicable." We conclude, however, that at this time Bradford's and ANR's disagreement over the future end date is not appropriate for judicial determination as the Court has no facts to base its decision on. See Parker v. Town of Milton, 169 Vt. 74, 77 (1998) (recognizing that the judicial authority is limited to actual cases or controversies and not "mere speculat[ion] about impact of some generalized grievance"). Bradford's suggestion that under the revised CAP it may be required to continue monitoring in excess of the time required under the statutes, regulations, and the IROC is mere speculation and hypothesis.

Analytical Methodologies

The revised CAP requires analytical EPA Method 8021b and EPA Method 8270. ANR selected these methods because they are the least costly methods capable of generating the required data. Bradford proposes using EPA Method 8270d, a method with achieves a lower detection limit, in place of EPA Method 8270, and EPA Method 8260b in place of EPA Method 8021b. ANR does not object to these substitutes. We conclude that Bradford may, at its

election and in a scientifically uniform manner, substitute EPA Method 8270d for Method 8270 and substitute EPA Method 8260b for Method 8021b.

ANR's Cost Recovery

ANR seeks to recover its costs paid to The Johnson Company for site investigation and analysis. ANR requested that Bradford perform additional site investigation work and Bradford failed to timely do so. As a result, ANR retained The Johnson Company to do the additional work. ANR offers that The Johnson Company's work was necessary to understanding the Site and contamination and to evaluate the potential impacts to public health and the environment. See 10 V.S.A. § 6615(a)(4)(B). ANR paid \$38,227.96 to The Johnson Company and Bradford does not dispute this amount or its reasonableness. ANR additionally request that prejudgment interest of 12% per annum be added to this cost. Prejudgment interest is typically awarded as of right when damages are liquidated or reasonably certain. Birchwood Land Co., Inc. v. Ormond Bushey & Sons, Inc., 2013 VT 60, ¶ 23, 194 Vt. 478; See V.R.C.P. 54(a) ("In an action where monetary relief is awarded, the amount of the judgment shall include the principal amount found to be due [and] all interest accrued on that amount up to and including the date of entry of judgment . . ."). ANR payments to The Johnson Company are summarized in Exhibit ANR-19. Attached as Appendix 1 of ANR's Proposed Finding of Fact and Post-Trial Memorandum is ANR's calculation of Prejudgment interest through July 31, 2-14.

Bradford does not oppose ANR's request for cost recovery or request for prejudgment interest. We therefore conclude that ANR's costs paid to The Johnson Company are reasonable and Bradford shall reimburse ANR the \$38,227.96 plus prejudgment interest of 12% per annum. Within 7 days of this Decision, ANR shall file an updated prejudgment interest calculation showing accrued interest to the date of this decision. Within 30 days of ANR filing the updated Prejudgment interest calculation, Bradford shall pay to ANR the \$38,227.96 plus the full prejudgment interest up to the date of this decision.

Conclusion

We conclude that the deed restrictions and Bradford's obligation to pursue reclassification of groundwater as described and set forth in Exhibit ANR-17B, Section 4.2.1 are reasonable and necessary. Bradford shall provide ANR with separate proposed deed

restrictions within 60 days of this Order for the entire Site and the impacted portion of Clinton Street. The Town shall cooperate in good faith with Bradford in developing the deed restriction for Clinton Street. SRDC has agreed to the deed restrictions for the J&L property. Within 60 days of this Order, Bradford shall provide ANR with a draft petition to reclassify groundwater as required by the CAP.

The Court also concludes that ANR's well array consisting of the wells listed on pages 18 and 19 of the Revised CAP, Exhibit ANR-17B, and as depicted on Exhibit ANR 35, are necessary and reasonable with the following modifications:

1. Wells GMW-2, GMW-4, MW-10S, JL-103, JL-4, MW-12, MW-13, MW-14, MW-6, MW-9S, JL-101, MW-04-14, MW-04-16 remain as shown and described.
2. Wells NW-2 and NW-3 are eliminated.
3. NW-4 (NW-4S/4D) – Pursuant to the Stipulation between ANR and SRDC, this well is to be relocated to facilitate the potential redevelopment of the SRDC property. The new location is show on Exhibit ANR-35. This well will consist of a shallow well (NW-4S) and a deep well (NW-4D).

We require Bradford to perform quarterly sampling, analysis, and reporting for the first 2 years and, based upon this data, Bradford may then make a formal request to modify the CAP to reduce the number of wells to be sampled in the future. While ANR considers Bradford's request to modify the CAP, Bradford will be required to continue semi-annual sampling, analysis, and reporting with sampling occurring in the late fall and late spring. Once Bradford files a request to modify the CAP, ANR must respond in writing within 30 days, and thereafter, Bradford will have 30 days to reply to ANR's response. ANR must then issue a written decision on Bradford's request within 45 days; this decision would be appealable to this Court. The CAP is otherwise unmodified with respect to sampling frequency, reporting, and requests for modification of the CAP.

Bradford may, at its election and in a scientifically uniform manner, substitute EPA Method 8270d for Method 8270 and substitute EPA Method 8260b for Method 8021b.

Bradford's request that the Court order that it may cease groundwater monitoring if there is sufficient data to demonstrate that contaminate levels are stable or declining is denied at this time.

Bradford shall reimburse ANR the \$38,227.96 paid to The Johnson Company plus prejudgment interest of 12% per annum. Within 7 days of this Decision, ANR shall file an updated prejudgment interest calculation showing accrued interest to the date of this decision. Within 30 days of ANR filing the updated Prejudgment interest calculation, Bradford shall pay to ANR the \$38,227.96 plus the full prejudgment interest up to the date of this decision.

This concludes the matter before the Court. A Judgment Order accompanies this Merits Decision.

Electronically signed on December 22, 2014 at 04:00 PM pursuant to V.R.E.F. 7(d).

A handwritten signature in black ink, appearing to read "Tom Walsh", with a stylized flourish at the end.

Thomas G. Walsh, Judge
Superior Court, Environmental Division