

Notably, the Agency has neither acknowledged nor responded to Invensys' arguments that Robinson Brook is intermittent. The current Fact Sheet characterizes Robinson Brook by stating that it "is located at the headwaters of the Taunton River Basin, and it is a tributary to the Rumford River . . . is not specifically identified in the tables or maps in the Massachusetts Water Quality Standards . . . [and in the segment receiving the Invensys discharge] is also not identified in the 2008 Integrated List."<sup>119</sup> These observations are consistent with Robinson Brook being intermittent, as established under 310 CMR 10.58(2)(a)(1)(c), which makes EPA's failure to address this issue even more glaring.

EPA's own guidance (both current and pending) establishes that it may not exercise Clean Water Act jurisdiction over tributaries "whose flow is 'coming and going at intervals . . . broken, fitful,"<sup>120</sup> "ephemeral tributaries which flow only in response to precipitation,"<sup>121</sup> or "intermittent streams which do not typically flow year-round or have continuous flow at least seasonally,"<sup>122</sup> without first conducting a "fact-specific analysis"<sup>123</sup> well documented in the record<sup>124</sup>

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It is true that these observations were made during a declared drought. However, these data are only used to confirm data that already establish that Robinson Brook is intermittent. Moreover, the data are overwhelming – thirty-three consecutive days with no flow is fairly conclusive.

<sup>119</sup> Fact Sheet, p. 2.

<sup>120</sup> EPA Guidance "Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States" (December 2, 2008) ("2008 CWA Jurisdiction Guidance"), p. 7, quoting Scalia decision in Rapanos, 547 U.S. 715, 732-33, n.5 (2006); see also EPA's "Draft Guidance on Identifying Waters Protected by the Clean Water Act" (May 2, 2011), p. 27.

<sup>121</sup> Id.

<sup>122</sup> Id.

<sup>123</sup> 2008 CWA Jurisdiction Guidance, p. 1 ("The agencies will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water: Non-navigable tributaries that are not relatively permanent . . . . The agencies will apply the significant nexus standard as follows: A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters[:]) Significant nexus includes consideration of hydrologic and ecologic factors"); see also pp. 8 (listing hydrologic and ecologic factors to be considered in significant nexus analysis) & 10-11 (describing what a significant nexus analysis should include).

<sup>124</sup> Id. at p. 11 ("EPA regions shall document in the administrative record the available information regarding whether a tributary and its adjacent wetlands have a significant nexus with a traditional navigable water, including the physical indicators of flow in a particular case and available information regarding the functions of the tributary and any adjacent wetlands. The agencies will explain their basis for concluding whether or not the tributary and its adjacent wetlands, when considered together, have a more than speculative or insubstantial effect on the chemical, physical, and biological integrity of a traditional navigable water."); see also pp. 12-13:

EPA regions will ensure that the information in the record adequately supports any jurisdictional determination. The record shall, to the maximum extent practicable, explain the rationale for the determination, disclose the data and information relied upon, and, if applicable, explain what data or information received greater or lesser weight, and what professional judgment or assumptions were used in reaching the determination . . . EPA regions will also demonstrate and document in the record that a particular water either fits within a class . . . not requiring a significant nexus determination, or that the water has a significant nexus with a traditional navigable water. As a

demonstrating that there is a “significant nexus with a traditional navigable water.”<sup>125</sup> The Agency has failed to provide *any* documentation of its jurisdictional determination for Robinson Brook. There is nothing in the record to indicate that EPA has so much as considered – let alone conducted a fact-specific analysis to determine – whether Robinson Brook has the capacity to “significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as ‘navigable’”<sup>126</sup> or whether jurisdiction under the Clean Water Act is appropriate at all. This dearth of record support is contrary to EPA’s own guidance that it must “ensure that the information in the record adequately supports any jurisdictional determination...explain the rationale for the determination [and] disclose the data and information relied upon.”<sup>127</sup>

Thus, EPA has failed to properly document its jurisdictional determination for Robinson Brook, as required by Agency policy. Absent such a determination, it has no authority under the CWA to require a permit for the discharge to Robinson Brook.

**Response IS #10:** The Robinson Brook stream channel is clearly shown on the USGS topographical maps (Mansfield Quadrangle) as originating at the Invensys System site and flowing to the Rumford River. The Rumford River ultimately flows to the Atlantic Ocean via the Taunton River and Mount Hope Bay. The fact that the headwaters of Robinson Brook, like the headwaters of most streams, flows intermittently does not determine whether or not it is a water body of the United States and therefore subject to the Clean Water Act and the State Water Quality Standards. Intermittent streams support a diversity of aquatic life and are critical to the health of downstream waters (see: <http://cwt33.ecology.uga.edu/publications/3060.pdf>) (see also Response IS4). EPA also notes that the permittee has previously applied for, and received coverage for discharges to Robinson Brook under EPAs Multi-Sector General Permit. Further, the fact that the state of Massachusetts has classified Robinson Brook as intermittent for purposes of a separate regulatory program is not relevant to NPDES permitting requirements.

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matter of policy . . . EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

All pertinent documentation and analysis for a given jurisdictional determination . . . shall be adequately reflected in the record and clearly demonstrate the basis for asserting or declining CWA jurisdiction. Maps, aerial photography, soil surveys, watershed studies, local development plans, literature citations, and references from studies pertinent to the parameters being reviewed are examples of the information that will assist staff in completing accurate jurisdictional determinations.

<sup>125</sup> *Id.* at pp. 7 (“[R]elatively permanent’ waters do not include ephemeral tributaries which flow only in response to precipitation and intermittent streams which do not typically flow year-round or have continuous flow at least seasonally. However, CWA jurisdiction over these waters will be evaluated under the significant nexus standard . . .”) & 12 (“The agencies will also decide CWA jurisdiction over other non-navigable tributaries . . . based on a fact-specific analysis to determine whether they have a significant nexus with traditional navigable waters.”)

<sup>126</sup> *Rapanos*, 547 U.S. at 780; see also 2008 CWA Jurisdiction Guidance, p. 3.

<sup>127</sup> 2008 CWA Jurisdiction Guidance, p. 12.

As it applies to non-navigable tributaries and their adjacent wetlands, the term “waters of the United States” was construed by the Supreme Court in *Rapanos v. United States*, 547 U.S. 715 (2006). Accordingly, EPA has evaluated the jurisdictional status of the streams on the Site in light of the *Rapanos* decision.

In *Rapanos* no single opinion commanded a majority of the Court. Rather, *Rapanos* set forth two distinct standards for evaluating CWA jurisdiction over wetlands adjacent to non-navigable tributaries: the plurality standard (authored by Justice Scalia) and the standard in Justice Kennedy’s concurring opinion. Justice Scalia’s four-justice plurality opinion interpreted the term “waters of the United States” as encompassing (1) “relatively permanent, standing or continuously flowing bodies of water” connected to traditional navigable waters, 547 U.S. at 739, and (2) wetlands with a continuous surface connection to a relatively permanent water. *Id.* at 742. Justice Kennedy’s concurrence interpreted “waters of the United States” to encompass wetlands and other waters that “possess a ‘significant nexus’ to waters that are or were navigable in fact or that could reasonably be so made.” *Id.* at 759. According to Justice Kennedy, a significant nexus exists where “the wetlands either alone or in combination with similarly situated lands in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as ‘navigable.’” *Id.* at 779-80.

Because there was no majority opinion in *Rapanos* interpreting the scope of “waters of the United States,” several courts have addressed whether CWA jurisdiction must be established under Justice Scalia’s plurality standard or Justice Kennedy’s concurrence standard. Massachusetts is in the First Circuit, which is one of several circuits to hold that either standard can be applied. See *United States v. Johnson*, 467 F.3d 53, 66 (1st Cir. 2006) (federal government can establish jurisdiction over waters that “meet either the plurality’s or Justice Kennedy’s standard as laid out in *Rapanos*”); see also *United States v. Bailey*, 571 F.3d 791, 799 (8th Cir. 2009) (same). The First Circuit’s approach is consistent with the position taken by DOJ, EPA and the Corps.<sup>128</sup>

EPA’s Office of Research and Development (ORD) has recently (January 2015) finalized the science report, *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence* (Connectivity Report). The purpose of the Connectivity Report was to summarize the current scientific understanding about the connectivity and mechanisms by which streams and wetlands, singly or in aggregate, affect the physical, chemical, and biological integrity of downstream waters. In completing the report, EPA conducted a thorough review of the literature regarding the effects that streams, nontidal wetlands, and open waters have on larger downstream waters such as rivers, lakes, estuaries, and oceans. One of the main goals of the Report was to determine what are the physical, chemical, and biological connections to, and effects of, ephemeral, intermittent, and perennial streams on downstream waters, including streams such as Robinson Brook which, for some distance from its source, is intermittent. The Report concluded that the scientific literature unequivocally

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<sup>128</sup> U.S. Army Corps of Engineers, Department of the Army, Department of Defense; and EPA recently published a Rule that defines jurisdiction for streams and wetlands under *Rapanos* (see 33 CFR Part 328; 40 CFR Part 230), “**Definition of Waters of the United States**”. That Rule will become effective 60 days after its publication in the Federal Register.

demonstrates that streams, regardless of their size or frequency of flow, are connected to downstream waters and strongly influence their function.

Page 3-2 of Report states, with respect to the importance of headwater streams: “First-order streams typically are most abundant, although individually they have the smallest drainage areas and shortest average stream lengths (Horton, 1945; Schumm, 1956; Ijjasz-Vasquez et al., 1993). When considering drainage area and stream length of headwater streams together, however, they can represent most of the river watershed and network. Thus, despite their small individual size, these headwater streams cumulatively can have a large influence on downstream waters. As stated in the Connectivity Report Conclusions, at pages 6-1 and 6-2,

The scientific literature unequivocally demonstrates that streams, individually or cumulatively, exert a strong influence on the integrity of downstream waters. All tributary streams, including perennial, intermittent, and ephemeral streams, are physically, chemically, and biologically connected to downstream rivers via channels and associated alluvial deposits where water and other materials are concentrated, mixed, transformed, and transported. Streams are the dominant source of water in most rivers, and the majority of tributaries are perennial, intermittent, or ephemeral headwater streams. Headwater streams also convey water into local storage compartments such as ponds, shallow aquifers, or stream banks, and into regional and alluvial aquifers; these local storage compartments are important sources of water for maintaining baseflow in rivers. In addition to water, streams transport sediment, wood, organic matter, nutrients, chemical contaminants, and many of the organisms found in rivers. The literature provides robust evidence that streams are biologically connected to downstream waters by the dispersal and migration of aquatic and semiaquatic organisms, including fish, amphibians, plants, microorganisms, and invertebrates, that use both upstream and downstream habitats during one or more stages of their life cycles, or provide food resources to downstream communities. In addition to material transport and biological connectivity, ephemeral, intermittent, and perennial flows influence fundamental biogeochemical processes by connecting channels and shallow ground water with other landscape elements. Physical, chemical, and biological connections between streams and downstream waters interact via integrative processes such as nutrient spiraling, in which stream communities assimilate and chemically transform large quantities of nitrogen and other nutrients that otherwise would be transported directly downstream, increasing nutrient loads and associated impairments due to excess nutrients in downstream waters.

The information reflected in the Connectivity Report clearly demonstrates that headwaters streams such as Robinson Brook, especially when considered in the aggregate with other similarly situated streams in the region, as authorized under the Justice Kennedy Standard, have a significant physical, chemical and biological effect on downstream navigable waters. The Connectivity Report informs the EPA’s and U.S. Army Corps of Engineers’ recently published Clean Water Rule, which, when it becomes effective, will confirm the jurisdictional status of headwaters streams such as Robinson Brook, provided that they meet the definition of tributary in the Rule.<sup>129</sup> The Connectivity Report has been subject to scientific peer review and is

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<sup>129</sup> Robinson Brook meets the definition of tributary in the Clean Water Rule at 33 CFR §328.3(c)(3); 40 CFR §230.3(s)(3)(iii), because it contributes flow to waters used in interstate commerce, such as the Taunton River, and

scientific record support for a determination that Robinson Brook satisfies the “significant nexus” test established under Justice Kennedy’s concurring opinion in *Rapanos*.

Robinson Brook performs several of the important functions of headwaters streams described in the Connectivity Report, and its performance of these important functions demonstrates its significant nexus to downstream rivers, including the Rumford and Taunton Rivers, especially when considered in the aggregate with other similarly situated streams in the region. Specifically, observations in the field confirm that Robinson Brook, along with other headwaters streams in the area, conveys groundwater and overland surface flows to downstream waters, helping to maintain baseflows in downstream waters during low flow periods, and also helping to maintain stream temperature regimes during such low flow periods. These functions are critical for survival and reproduction of instream and riparian biota. Robinson Brook also mitigates downstream flooding impacts through its connectivity to groundwater, riparian areas and wetlands, where waters can be stored during excessive runoff or precipitation events.

In addition, Robinson Brook and similarly situated headwaters streams in the watershed help to maintain water quality through nutrient uptake, attenuating nutrient loads downstream. Instream and riparian plants observed in and along Robinson Brook show evidence of nutrient uptake from surrounding nutrient pollution sources. Robinson Brook and similarly situated headwater streams in the watershed also transport sediment loads, woody debris and detritus further downstream for utilization as food sources. Robinson Brook plays a role in breaking down these materials for consumption by aquatic species downstream. Aquatic species dependent on these functions were observed in Robinson Brook by EPA staff. Robinson Brook and other similarly situated streams in the watershed also provide seasonal habitat for key organism life stages.

Thus, while the Connectivity Report provides record support for the proposition that all tributaries are connected to downstream waters and strongly influence their function, field observations confirm that Robinson Brook specifically performs many of the important functions described in the Connectivity Report, and combined with other similarly situated streams in the watershed, its importance to the quality and integrity of downstream navigable waters is clear (see Memo to the file from Hilary Snook (6/1/15): Robinson Brook). This is true even though Robinson Brook is a heavily impacted urban stream that does not perform its natural functions to the same degree that it would as an unimpacted stream. It should be noted that one of the goals of the Clean Water Act, as specified in Section 101 of the Act, is to “restore” the chemical, physical, and biological integrity of the Nation’s waters. The NPDES permit is one of the mechanisms for achieving that goal, and in the long term a restored stream with reduced pollutant levels might bring about, for example, an improved stream habitat and a more diverse species composition that more effectively supports downstream waters.

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possesses a bed and bank and ordinary high water mark. Thus, under the Clean Water Rule (when it becomes effective), Robinson Brook is a water of the United States. However, before the Rule was published, EPA had already developed an analysis in this Response to Comments demonstrating that Robinson Brook satisfies the Justice Kennedy significant nexus test. That analysis is retained in this Response to Comments as an additional and alternative basis for jurisdiction that does not depend on the Clean Water Rule becoming effective.

In addition to meeting the significant nexus test from Justice Kennedy's *Rapanos* opinion, the status of Robinson Brook as a water of the United States may also be established under the Scalia or Plurality Standard from *Rapanos*. As noted above, the Scalia or Plurality Standard from the *Rapanos* opinion holds that "waters of the United States" include (1) relatively permanent, standing or continuously flowing bodies of water" connected to traditional navigable waters. The *Rapanos* plurality noted that its reference to "relatively permanent" waters did "not necessarily exclude streams, rivers, or lakes that might dry up in extraordinary circumstances, such as drought," or "seasonal rivers, which contain continuous flow during some months of the year but no flow during dry months . . . ." 547 U.S. at 732 n.5 (emphasis in original).

While Robinson Brook is intermittent upstream of the point where it emerges from an underground pipe at Mechanic Street, it becomes perennial (flowing at all times) at the point it crosses Mechanic Street (see <http://viewer.nationalmap.gov/viewer/>). This is consistent with the commenter's understanding and also with observations made by the Foxborough Conservation Commission (12/18/2013 email from Jane Sears Pierce). Thus, under the Scalia or Plurality Standard, Robinson Brook is a water of the United States *at least* from the point where it has been observed to carry perennial flow at Mechanic Street. Moreover, while there is uncertainty as to the precise point at which Robinson Brook becomes perennial, it likely is a "relatively permanent" or seasonally flowing water at a point some distance above the Mechanic Street location where it has been observed to be perennial.

Current information does not allow a determination of the precise point where Robinson Brook becomes a relatively permanent water or seasonally flowing water and therefore subject to jurisdiction under the Scalia standard. Given its observed status as a perennial stream where it crosses Mechanic Street, the point at which it becomes relatively permanent is some point above Mechanic Street. As Invensys acknowledges in its comment, the flow data it has presented was collected during a drought year and is not necessarily reflective of normal flows. Further, Invensys's data only spans the period only from August of 2001 to March of 2002 and does not include spring flows which tend to be the highest. Thus, it has not been demonstrated that Robinson Brook is not a relatively permanent water even at the point of discharge. Thus, the point at which Robinson Brook becomes jurisdictional under the Scalia or Plurality standard of *Rapanos*, which requires at least seasonally flowing water, is at some undetermined point between the outfall and Mechanic Street.

Discharges from Outfall 002 ultimately reach the perennially flowing stretch of Robinson Brook and are therefore subject to NPDES permitting requirements even if Robinson Brook is assumed to be jurisdictional only from the point at which it becomes perennial. Moreover, even if the Kennedy Standard basis for establishing jurisdiction over all of Robinson Brook is ignored, and jurisdiction is assumed to exist under the Scalia Standard only from the point of observed perennial flow at Mechanic Street, the resulting permit would contain the same effluent limits, because during critical, low flow conditions the flow reaching the perennial portion of Robinson Brook is dominated by effluent from Outfall 002.

If the compliance point for the Robinson Brook discharge is established at the point where the receiving water flow is known to be perennial (Mechanic Street), the limits would continue to be established at the ambient criteria level due to the lack of any significant dilution during the

worst case low flow conditions under which the water quality standards are required to be met (7Q10 flow). At the point where a stream transitions from intermittent flow to perennial flow, the flow available for dilution under 7Q10 flow conditions would be insignificant. Additionally, the sampling point for determination of compliance with the limits remains at the point of discharge (composite sample of manhole #26 and manhole #39) due to the inability to segregate the Invensys discharge from municipal storm discharges that enter Robinson Brook downstream of the Invensys discharge but upstream of Mechanic Street. As indicated in Comment IS #1, upon leaving the Facility property, the Invensys discharge is mingled with discharges from two municipal street drains located on Neponset Avenue.

In conclusion, it is not necessary to determine the precise point at which Robinson Brook becomes a relatively permanent water because it is perennial and therefore jurisdictional under the Plurality test at least from Mechanic Street and beyond, and during critical low-flow conditions the discharge from Outfall 002 will reach the perennial portion of Robinson Brook in an essentially undiluted state. Thus, existing information is sufficient to confirm that the discharge from Outfall 002 is a regulated discharge and subject to the same effluent limits whether Robinson Brook is considered jurisdictional at the point of discharge or at Mechanic Street.

Moreover, reliance on the Scalia test for jurisdictional status of Robinson Brook is not necessary in light of the Connectivity Report and its unequivocal scientific support for the proposition that all tributary streams, including perennial, intermittent, and ephemeral streams, are physically, chemically, and biologically connected to and have a significant effect on downstream rivers, and in light of observations of Robinson Brook confirming that it performs many of the functions described in the Connectivity Report as supporting the physical, chemical and biological integrity of downstream waters. Finally, the status of Robinson Brook as a water of the United States will also be established, upon its effective date, under the recently published Clean Water Rule.

**Comment IS #11:** Even if there were a basis for concluding that EPA has jurisdiction to regulate Robinson Brook under the CWA, the Agency has failed to provide a sufficient justification for removing Outfall 002 from coverage under the Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP). In a June 2002 letter to Invensys, the Agency set forth two purported bases for removing Outfall 002 from coverage under the MSGP: (1) the nature of the discharges, which include groundwater and sump pump discharges “not authorized by the MSGP”; and (2) EPA and MassDEP’s “belie[f] that the storm water discharges alone are a significant contributor of pollutants” based on “effluent sampling data collected by the company from [Outfall 002] during dry and wet weather on July 15, 2001<sup>130</sup> and July 17, 2001”. EPA’s conclusion that coverage under the MSGP is inappropriate is flawed.

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<sup>130</sup> While the June 2002 letter refers to sampling data collected on July 15, 2001, Invensys is not aware of any sampling having been conducted on that date. Rather, Invensys believes that the Agency is likely referring to sampling conducted on June 15, 2001.

First, the sump discharges should be considered authorized non-storm water discharges in that they constitute “foundation or footing drains where flows are not contaminated with process materials.” The sumps dewater groundwater from building basements, which does not come in contact with Facility processes. Second, with respect to groundwater discharges, while the limited dry weather sampling data available do identify exceedances of NRWQC for certain constituents<sup>131</sup>, such data were collected prior to the 2002-2003 drain line cleanout, and are therefore not likely to be representative of the current groundwater. Further, it is not clear that the fact of such exceedances necessarily results in the water being considered “contaminated”, especially here where, as described in Section III.B.2, *supra*, the exceedances are of NRWQC which fail to consider site-specific conditions and species.

In addition, Invensys strongly disagrees with the Agency’s contention that the storm water discharges are a “significant contributor of pollutants.” As an initial matter, Invensys is unaware of *any* existing data which would allow the Agency to determine the concentrations of constituents in storm water alone. Rather, the available data is representative of the combined flow of storm water, sump discharge and groundwater.<sup>132</sup> Therefore, the Agency lacks a scientific basis for its conclusion. Further, the Agency does not have a sufficient basis on which to determine that the Outfall 002 discharges, even as a combined stream, are a significant contributor of pollutants to Robinson Brook. The entire basis for the Agency’s conclusion is monitoring data collected on *two* dates in 2001. As noted in Section III.A, *supra*, this monitoring data is likely not representative of the current discharge, and the Agency has not provided any analysis of whether the discharges are likely to significantly contribute pollutants using all available data. Finally, as described in Section III.B, *supra*, any exceedances are of NRWQC, which fail to consider site-specific conditions and species. Given the circumstances of this case, the use of such criteria is inappropriate.

Accordingly, Invensys requests that the Agency reconsider its determination to terminate coverage of the Robinson Brook discharge under the MSGP.

**Response IS #11:** While the Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP) does allow for the discharge of authorized non-storm water discharges that constitute “foundation or footing drains where flows are not contaminated with process materials”, EPA does not concur that the groundwater being discharged via the sumps is not contaminated with process materials. The groundwater at this site contains significant levels of contamination associated with process materials that have been used at this facility. In particular, the sump discharges contain levels of cadmium, copper, and lead that are significantly higher than values that could reasonably be expected from groundwater that is not contaminated by process materials, and certainly higher than aquatic criteria values (see Fact Sheet Table C.3). See Response IS #1 for a detailed discussion of pre and post cleanout data. See Response IS #3 for a discussion of site specific conditions and site specific criteria.

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<sup>131</sup> See Fact Sheet, Attachment C.2.

<sup>132</sup> Certain of the data also likely reflect the discharges of two non-Invensys municipal storm drains from Neponset Avenue located between the Facility and Outfall 002, as discussed in Section III.A, *supra*.



Furthermore, even if the sump discharges were considered an authorized discharge under the MSGP, the commingled discharges represent a significant contributor of pollutants. Section 122.28(b)(3)(i) of the regulations allows EPA to require an individual permit where a discharge constitutes a significant contributor of pollutants. EPA reaffirms its 2002 determination that these discharges meet the criteria of Section 122.28(b)(3)(i)(G). Relevant factors considered in making this determination include the location of the discharge at the vulnerable headwaters of Robinson Brook, the size of the discharge with respect to the relatively small flow of the brook, and the quantity and nature of the pollutants discharged (See Fact Sheet Appendix C).

As documented in the Fact Sheet, data collected for outfall 002, subsequent to the 2002 letter, confirms EPA's position that the discharges contain contaminants that warrant an individual permit in order to ensure that the discharges do not cause or contribute to water quality standards violations.

**Comment IS #12:** The 2011 Draft Permit requires Invensys to sample for toxics on a weekly basis. The Agency has failed to provide an adequate justification for the imposition of such an excessive requirement. Further, such requirement cannot be squared with the Agency's well-established policy that needless and burdensome monitoring is to be avoided. Nor can it be squared with the Agency's treatment of other permittees in Region 1.

Faced with a draft permit in 2003 that increased sampling for toxics in the Outfall 001 discharge *twelve-fold*, from once per quarter to once per week, Invensys argued that such a change was excessive and requested a justification from EPA for the striking departure from its established policy and prior requirements.<sup>133</sup> Citing EPA's then-current NPDES Permit Writers' Manual, Invensys explained that the Agency's own guidance prohibits the imposition of unnecessary or burdensome monitoring.<sup>134</sup> Invensys reiterated the same argument in its 2005 Comments on the GE Permit.<sup>135</sup> Since the submission of those comments, the Manual has changed, but EPA's stated policy has not. Monitoring frequencies must still be "sufficient to characterize the effluent quality and to detect events of noncompliance, considering the need for data and, as appropriate, *the potential cost to the permittee*," and they "should not be excessive" or unnecessary "to provide sufficient information about the discharge."<sup>136</sup>

Despite the fact that the new Manual expressly states that "decisions for setting monitoring frequency should be described in the fact sheet,"<sup>137</sup> the Agency has provided no explanation for why it has completely ignored the cost to Invensys of weekly monitoring. Weekly monitoring will involve significant additional expense compared to the monitoring that is required under the current permit. Indeed, Invensys anticipates that compliance with the monitoring requirements

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<sup>133</sup> E.g., 2003 Comments, Table 1, p. 3, No. 10 & Table 2, p. 1., No. 1.1

<sup>134</sup> 2003 Comments, p. 13 (quoting EPA's 1996 NPDES Permit Writers' Manual, p. 119) & Table 1, p. 3, No. 10.

<sup>135</sup> 2005 Comments, p. 3.

<sup>136</sup> Manual, p. 8-5 (emphasis added).

<sup>137</sup> Id.

proposed in the 2011 Draft Permit will require Invensys to expend \$200,000 in initial outlay for sampling equipment, plus annual monitoring costs ranging from approximately \$40,000 to \$100,000. On the facts of this case, such costs are shockingly excessive on their face. The imposition of such burdensome and costly monitoring requirements is contrary to Agency policy, and is inconsistent with virtually all other permits within Region 1 that Invensys has reviewed.

Indeed, rather than responding to Invensys' comments by providing a meaningful explanation for why it believes weekly monitoring to be appropriate for Outfall 001,<sup>138</sup> EPA has moved to an even more extreme position, *doubling* the monitoring frequency for toxics in the Outfall 002 discharge from twice per month<sup>139</sup> to once per week without mentioning the fact that it is doing so or providing any justification for its action. This is, again, a blatant violation of the EPA's own guidance, which requires the Agency to describe its "decisions for setting monitoring frequency" in the fact sheet.<sup>140</sup>

As to Outfall 001, EPA attempts to justify the onerous monitoring requirements on the grounds that the discharge is variable, stating that "[t]he data indicate that there is significant variability in almost all parameters and this, in part, reflects differences in weather conditions as well as the activation frequency of numerous sump pumps." It is undisputed that a key factor in establishing what monitoring frequency is truly necessary is the expected variability of the discharge. However, there is no evidence to support that Invensys' discharges are so variable as to merit the extremely costly requirement of *weekly* monitoring. As noted in Section III.A, *supra*, storm water discharges are variable, which is the very reason EPA's established policy is to employ BMPs rather than numeric effluent limitations in storm water permits. However, such variability simply does not necessitate weekly monitoring. Indeed, as discussed in further detail below, Invensys has reviewed numerous NPDES permits for storm water or commingled storm water and groundwater discharges issued by Region 1 and has not located another permit that requires such frequent monitoring for toxics.

As noted, EPA does not so much as mention the increased frequency of toxics monitoring required for Outfall 002 under the 2011 Draft Permit, so it is not clear whether data variability is the EPA's purported justification for imposing such frequent monitoring. What is clear is that EPA has based this increase on data that was not only insufficient to justify such a frequency in

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<sup>138</sup> Invensys previously noted that EPA said "nothing whatsoever regarding the frequency of monitoring." 2003 Comments, p. 13. EPA's new assertion at page 12 of the Fact Sheet that it "believes that these frequencies are necessary to characterize the discharge, and to ensure that adequate numbers of both dry and wet weather events are sampled" is a statement of EPA's conclusion, not a substantive justification, and it does no more than the prior lack of explanation to justify such frequent, costly monitoring. EPA may not rely on *ipse dixit* to justify permit requirements. *E.g.*, *American Petroleum Institute v. EPA*, 661 F.2d 340, 349 (5th Cir. 1981) ("Courts require that administrative agencies articulate the criteria employed in reaching their result and are no longer content with mere administrative *ipse dixits* based on supposed administrative expertise.") citing *Appalachian Power Co. v. EPA*, 477 F.2d 495, 507 (4th Cir. 1973).

<sup>139</sup> As Invensys noted in 2003, twice-monthly monitoring of Outfall 002 toxics in 2003 Draft Permit was itself an unexplained, unjustified increase in monitoring frequency from prior drafts of the permit, as EPA had increased VOC sampling six-fold from once per quarter to twice per month and created a brand new requirement for metals testing twice per month. *See* 2003 Comments, Table 1, p. 3, No. 13.

<sup>140</sup> *Manual*, p. 8-5.

2003, but is also outdated. As Invensys noted in 2003, the “proposed sampling frequencies for Outfall 002 are based on effluent sampling conducted in 2001 and 2002.”<sup>141</sup> At that time, EPA interpreted such data as requiring twice-monthly sampling of metals and VOCs. The Robinson Brook sampling frequencies in the current draft are *still* based on data from 2001 and 2002,<sup>142</sup> but now EPA is inexplicably requiring twice as much sampling (i.e., once per week). EPA has provided no explanation for this change of position because, as noted, it has not mentioned changes to the Robinson Brook sampling at all, anywhere in the Fact Sheet or record. Furthermore, and as noted in Sections III.A and IV.C, *supra*, the 2001 and 2002 data is outdated. In 2003, Invensys argued that it was unreasonable for the Outfall 002 sampling frequency to be based on data from 2001 and 2002 because more recent and representative sampling data was available. Specifically, Invensys noted that February 2003 data was available from sampling that had been conducted “at the conclusion of a major drain line cleanout program to remove accumulated sediment from within the drain lines leading to Robinson Brook indicat[ing] that post-cleanout contaminant levels are generally lower than pre-cleanout levels.”<sup>143</sup> This is only more true today, as *additional* post-cleanout data (e.g., from November 2003) was made available to EPA after the 2003 Comments were submitted. Indeed, EPA not only received this more recent data from Invensys; it actually attached it to the Fact Sheet and referenced it.<sup>144</sup> Nevertheless, EPA persists in ignoring it for purposes of establishing the toxics sampling frequency for Outfall 002.

The frequency of the monitoring EPA is now requiring in the Outfall 001 discharge for tetrachloroethylene (PCE) also merits particular attention, as it highlights the manifest unreasonableness of the 2011 Draft Permit. EPA has removed all numeric VOC limits for Outfall 001,<sup>145</sup> but it has nevertheless increased the report-only sampling frequency for PCE *twelve-fold* from the once per quarter that was required under the 1991 Permit to once per week under the present draft. Thus, the sampling requirements have increased from four sampling events per year to 52 sampling events per year. As Invensys noted in 2003, this increased monitoring frequency is entirely unjustified. Since the 1991 permit was issued (with once per quarter VOC sampling), the Outfall 001 drain line has been cleaned. EPA admits that this effort by Invensys “resulted in a substantial reduction in the concentration of...VOC” in the Outfall 001 discharge<sup>146</sup> – “up to 70% lower.”<sup>147</sup> Moreover, as Invensys informed EPA earlier this year, “VOC levels detected in the [Outfall 001] discharge were all below applicable MCP standards

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<sup>141</sup> 2003 Comments, Table 1, p. 3, No. 14 & p. 4, No. 17.

<sup>142</sup> Fact Sheet, p. 13.

<sup>143</sup> 2003 Comments, Table 1, p. 3, No. 14 & p. 4, No. 17.

<sup>144</sup> Fact Sheet, p. 13, n.5 & Attachment C.7.

<sup>145</sup> This is not true for Outfall 002, where EPA has added or increased numeric standards for both TCE and PCE, which Invensys also believes to be unjustified, as discussed above.

<sup>146</sup> Fact Sheet, p. 4.

<sup>147</sup> 2003 Comments, Table 1, p. 3, No. 14 & p. 4, No. 17; *see also* Table 1, p. 3, No. 10.

and were determined by an LSP to pose no significant risk.”<sup>148</sup> Even EPA itself has “not found that [there is] reasonable potential to exceed the criteria . . . [because PCE] has not been detected in the effluent monitoring.”<sup>149</sup> While these circumstances are more than sufficient to cast doubt on EPA’s drastic increase in the frequency of required PCE monitoring in the Outfall 001 discharge, additional information demonstrates that EPA’s PCE requirements for Outfall 001 are unreasonable. Specifically, EPA bases its PCE monitoring requirement determination on data from a single sump<sup>150</sup> that contributes minimal flow to the Outfall 001 discharge, and considers that sump data in light of the human health criterion for the ingestion of fish (i.e., 3.3 ug/l),<sup>151</sup> which Invensys has repeatedly explained is an irrelevant concern for Gudgeon Brook.<sup>152</sup>

EPA has not even attempted to justify the increased costs associated with this twelve-fold increase in sampling events or explained what environmental benefits might result from it. Nor could it, as the costs of such increased monitoring far outweigh any environmental benefit that could come from increased monitoring for a constituent that has not been detected in the effluent monitoring.

The weekly toxics monitoring requirements EPA proposes to impose are not only inconsistent with the Agency’s stated policies and guidance; they are also unprecedented in their stringency and excess. All the other industrial storm water permits issued by Region 1 that Invensys has been able to locate require much less frequent monitoring for toxics.

As Invensys noted in 2005, before the aforementioned GE Permit was modified in 2009, it required monitoring no more than monthly and frequently quarterly. Weekly sampling was not even required for PCBs, which EPA specifically acknowledged have shown significant variability in the GE discharges.<sup>153</sup> EPA has never acknowledged Invensys’ comments regarding the GE Permit, let alone explained why increased monitoring requirements are warranted here. The frequency required under the GE Permit has since increased somewhat, but at most to twice-monthly during dry weather.<sup>154</sup> This is still half the monitoring required under the 2011 Draft Permit, despite greater evidence of variability in the GE discharges.<sup>155</sup> Moreover, the GE Permit only requires wet weather sampling one to three times per quarter – not weekly as for Invensys. This constitutes inconsistent implementation of the Manual criteria and unequal treatment of similarly situated parties, and it is therefore impermissible.

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<sup>148</sup> February 16, 2011 E-mail of Paul Ahearn to David Pincumbe.

<sup>149</sup> Fact Sheet, pp. 11-12.

<sup>150</sup> Id. at p. 11 & Attachment A.7.

<sup>151</sup> See id. at p. 11.

<sup>152</sup> E.g., October 30, 2001 Letter from Paul Ahearn to Janet Labonte, pp. 3-4; 2003 Comments, p. 7, n.13.

<sup>153</sup> 2005 Comments, pp. 1 & 3-4.

<sup>154</sup> 2009 Final GE Permit, supra, at pp. 2-14.

<sup>155</sup> See 2005 Comments, pp. 3-4.

Similarly, the Wyman Gordon Permit requires quarterly (report-only) monitoring for metals.<sup>156</sup> The Logan Airport Permit requires monthly (report-only) monitoring for bacteria – a problem pollutant at the site – and only quarterly (report-only) sampling for PAHs (report only).<sup>157</sup> And a multitude of other Region 1 permits reflect that quarterly or at most monthly monitoring – and *not* EPA’s attempted imposition of weekly monitoring requirements on Invensys – is the established norm.<sup>158</sup>

Finally, EPA has ignored Invensys’ repeated requests that, if the unprecedented weekly sampling requirements are retained over Invensys’ objection, a mechanism for relief be provided in the permit. Such a mechanism was first suggested by EPA.<sup>159</sup> In 2003, Invensys expressly asked that the permit “provide for the frequency of the monitoring to be reduced to once per quarter after twelve months of consistent results.”<sup>160</sup> As the 2003 Comments noted, this would have been consistent with the provisions in the 2003 Draft Permit for adjusting the frequency of WET testing – provisions which also exist in the 2011 Draft Permit.<sup>161</sup> EPA has failed to respond to Invensys’ comment in this regard. Invensys therefore reiterates its request that, if the excessive weekly monitoring requirements are retained in the permit over Invensys’ objection, the final

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<sup>156</sup> 2008 Final Wyman Gordon Permit, *supra*, at pp. 5-7.

<sup>157</sup> 2007 Final Logan Airport Permit, *supra*, at pp. 3, 5-6 (nn.3-4), 7, 9-10 (nn.8-9), 20, 22 & 23 (n.17).

<sup>158</sup> See, e.g., the NPDES permits by EPA Region 1 for: CSX Transportation in Allston (Permit No. MA0025704), available at <http://www.epa.gov/region1/npdes/permits/finalma0025704permit.pdf>, pp. 2 & 5 (monthly samples at most and only twice yearly monitoring for priority pollutants); Massachusetts Bay Transportation Authority (“MBTA”) in Somerville (Permit No. MA0003590), available at <http://www.epa.gov/region1/npdes/permits/2007/finalma0003590permit.pdf>, p. 2 (monthly samples at most and only quarterly monitoring for priority pollutants); Texas Instruments in Attleboro (Permit No. MA0001791), available at <http://www.epa.gov/region1/npdes/permits/2010/finalma0001791permit.pdf>, pp. 2-3 & 5-6 (monthly samples at most, quarterly samples for some VOCs, and only yearly monitoring for priority pollutants); Clean Harbors in Braintree (Permit No. MA0031551), available at <http://www.epa.gov/region1/npdes/permits/2011/finalma0031551permit.pdf>, p. 2 (monthly samples at most, and annual report-only monitoring of metals); Cornell-Dubilier in New Bedford (Permit No. MA0003930), available at <http://www.epa.gov/region1/npdes/permits/2008/finalma0003930permit.pdf>, p. 2 (quarterly samples at most, including for problem pollutant PCBs); Eastman Gelatine in Peabody (Permit No. MA0003956), available at <http://www.epa.gov/region1/npdes/permits/finalma0003956permit.pdf>, pp. 2 & 4 (quarterly monitoring for most pollutants, but metals monitoring only twice per year); Solutia in Chicopee (Permit No. MA0001147), available at <http://www.epa.gov/region1/npdes/permits/2008/finalma0001147permit.pdf>, pp. 2-31 (at most monthly; report-only metals at most once per quarter and often less, *i.e.*, once or twice per year; and report-only bacteria monitoring once per year); Saint-Gobain Abrasives, Inc. and Saint-Gobain Ceramics & Plastics, Inc. in Worcester (Permit No. MA0000817), available at <http://www.epa.gov/region1/npdes/permits/2009/finalma0000817permit.pdf>, pp. 2-3 & 7 (metals monitoring quarterly at most, sometimes only twice yearly). All websites last visited October 31, 2011.

<sup>159</sup> See 2003 Comments, Table 2, p. 1, No. 1.1.

<sup>160</sup> *Id.* at p. 14.

<sup>161</sup> *Id.* at Table 1, p. 3, No. 12.

permit contain a provision which automatically scales back the frequency at either or both outfalls after a period of twelve months of consistent results.

**Response IS #12:** The monitoring guidance in the Permit Writers' Manual indicates that the "permit writer should establish monitoring frequencies sufficient to characterize the effluent quality and to detect events of noncompliance, considering the need for data and, as appropriate, the potential cost to the permittee." The rationale for the monitoring frequency and why EPA does not believe that it is appropriate to reduce the frequency of monitoring is explained on page 12 of the Fact Sheet, including footnote #4, under the section pertaining to outfall 001. The same rationale is included in the section pertaining to outfall 002. Although EPA did not repeat footnote #4 in this section, the footnote clearly applies to both outfalls.

Both discharges contain a complex mix of contaminated groundwater, storm water, and sump discharges with limited treatment capability, significant variability in contaminant concentrations and receiving waters that afford no dilution in the near field. Dry weather discharge contaminant levels vary with changing groundwater levels and with whether or not one or more sumps are activated. In addition to the normal variability of storm water with the precipitation amount, precipitation intensity, and length of time between precipitation events, wet weather discharges also vary with the level of sump activation.

In response to comments received from Invensys on the draft 2003 permit, EPA reduced the monitoring requirements significantly. Specifically, EPA eliminated the once per month sampling requirement targeting wet weather conditions. While EPA did not agree with arguments for reducing the once per week monitoring requirement, EPA did conclude that the once per week monitoring would be sufficient to also capture enough wet weather events throughout the year to justify eliminating the once per month monitoring targeted at specific wet weather events. It is our judgment that pollutant discharge levels under the many different conditions for which these discharges occur are best characterized by weekly sampling. Adequate characterization of the discharges allows for ensuring that the discharges are in compliance with the permit limits as well as to verify that contaminants for which there are not water quality based limits in the permit are not being discharged at levels that might result in toxic impacts in the receiving waters. EPA does not agree that the sampling frequency is needless or overly burdensome. The commenter has not provided any supporting evidence that the discharges can be adequately characterized with less frequent monitoring.

There is no basis for comparing the frequency of monitoring in this permit to the frequency of monitoring in the 1991 permit that only covered non-contact cooling water and storm water and was issued long before the level of contamination at this site was adequately characterized. As for the other permits cited in the comment, see Response IS #1 regarding case-specific permit determinations. The sampling frequency in this permit is more frequent than permits that just cover storm water or permits that discharge to receiving waters with significant dilution. The Wyman Gordon permit cited addresses storm water only and the Logan Airport permit discharges to the Atlantic Ocean. Relative to the General Electric permit, as indicated in Response IS #1, specific BMPs which have sufficient potential to attain water quality criteria in the receiving waters were identified and these BMPs were required as part of the permit. Additionally, the General Electric facility is the subject of a federal Consent Decree with direct federal oversight of ongoing remediation activities. In that case, EPA believed that less frequent

monitoring was justified. EPA has included language in the final permit indicating that the sampling frequency during the term of the permit may be modified if sufficient justification is provided that less frequent monitoring will adequately characterize the discharge(s) and ensure attainment of water quality standards.

Relative to cost considerations, the Permit Writers' Manual indicates that cost of monitoring should be considered relative to the discharger's capabilities. Invensys, being a multinational corporation operating in over 180 countries and with annual revenues of over 3 billion, has the capability to conduct the necessary monitoring. More importantly, EPA regulations require monitoring at a frequency sufficient to yield data which are representative of the monitored activity (40 CFR 122.48), and require reporting at a frequency that takes into account the nature and effect of the discharge and assures compliance with permit limitations (40 CFR 122.44(i)). As discussed above, the monitoring frequencies established in the permit reflect these requirements.

**Comment IS #13:** The requirement for 24-hour composite samples for the monitoring of certain parameters remains unclear, despite the fact that Invensys has twice expressed confusion and requested clarification. Specifically, in October 2001, Invensys asked how monthly averages and daily maximum values were supposed to be reported using 24-hour composites.<sup>162</sup> In 2003, Invensys reiterated the comment: "The sampling for metals is proposed as using 24-hour composites, but the discharge limits are expressed as monthly averages or daily maximum values. How are the 24-hour composite samples to be used in such comparisons?"<sup>163</sup> EPA has still provided no response.

Moreover, Invensys has repeatedly objected that 24-hour composite sampling is excessive and unnecessary, requesting that EPA justify the requirement.<sup>164</sup> EPA has completely neglected to mention the requirement or Invensys' related comments anywhere in the Fact Sheet.

As Invensys explained in 2003, composite sampling is used to account for variability over 24 hours.<sup>165</sup> Invensys repeated this argument in its 2005 Comments, stating that 24-hour composite sampling "is a far more burdensome and expensive sampling method than the more typical grab sampling. Like frequent monitoring, composite sampling is appropriate only where variability within the sampling period is expected to be significant."<sup>166</sup> EPA has provided no argument or data demonstrating that such 24-hour variability exists in this case. Indeed, the available data demonstrate that EPA has no basis for assuming that such variability will exist in Invensys' discharges.

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<sup>162</sup> October 30, 2001 Letter from Paul Ahearn to Janet Labonte, Exhibit 2.

<sup>163</sup> 2003 Comments, Table 1, p. 2, No. 7.

<sup>164</sup> E.g., id. at Table 2, p. 1, No. 1.2 & p. 3, No. 2.

<sup>165</sup> Id. at p. 14.

<sup>166</sup> 2005 Comments, p. 3.

Almost all of the other Region 1 NPDES permits listed in the foregoing section require grab sampling, not 24-hour composites, and certainly not 24-hour composites every week. In fact, the only such permits to require any 24-hour composite sampling of similar discharges are the GE Permit, which includes some *twice-monthly* or *quarterly* 24-hour composite sampling of its *report-only* parameters, and the Texas Instruments permit, which does require 24-hour composite sampling for priority pollutants, but only *once per year*.<sup>167</sup> EPA has provided no justification for requiring such frequent 24-hour composites here or for its differential treatment of Invensys.

Invensys strenuously objects to this requirement and requests that the sampling requirement be altered to require only grab sampling.

**Response IS #13:** Grab samples are appropriate for intermittent short term discharges, such as discharges of storm water only from short duration rain events where acute toxicity is the only concern. Grab samples may also be appropriate where there is little variability throughout a day in pollutant discharge levels.

In addition to storm water discharges being extremely variable throughout a typical storm event, ground water contamination is rarely well mixed and the quantity of contaminated groundwater entering the drainage system will vary over time. Additionally, the activation of individual sump pumps and contamination levels in individual sump pumps vary over time. The discharge data, as documented in the Fact Sheet, clearly indicate that there is significant variability in almost all parameters. In other words, a grab sample might happen to occur at a time of relatively low contaminant concentrations in the discharge, even though concentrations could have been higher a short time before or after the grab sample was taken. Use of 24 hour composites alleviates this issue. In this case, the monitoring of continuous discharges that vary significantly and that have acute and chronic toxicity concerns is more appropriately conducted with composite sampling.

Composite samples are routinely used in permits for determining compliance with monthly average and daily maximum permit limits. All composite sample results during the month are averaged to determine the monthly average discharge value and the highest composite sample result for a month is used to determine compliance with the daily maximum limit.

**Comment IS #14:** The 2011 Draft Permit allows with respect to Outfall 001 that “[a]fter submitting four consecutive sets of whole effluent toxicity (WET) tests results, all of which demonstrate compliance with the WET permit limits, the permittee may request a reduction of the WET testing requirements.”<sup>168</sup> EPA therefore concedes that quarterly WET testing is not necessary after one year of such testing has demonstrated compliance.<sup>169</sup>

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<sup>167</sup> 2009 Final GE Permit, *supra*, at pp. 2-4, 6, 9 & 12-13; Texas Instruments Permit No. MA0001791, *supra*, at pp. 2 & 5. The Saint-Gobain Permit requires 24-hour composite sampling of its non-contact cooling water, but only once per quarter.

<sup>168</sup> 2011 Draft Permit, p. 4, n.10.

<sup>169</sup> EPA is not the only agency to espouse this interpretation. In 1991, in reviewing the permit which the present draft is intended to replace, multiple persons at MassDEP indicated that the frequency of toxicity testing should be reduced from once per quarter to once per year after one year of testing. September 26, 1991 Memorandum from Laurie Kennedy to Richard Chretien (Attachment 15 hereto) (“If acute toxicity is not detected in the discharge after



In 2003 Invensys noted that “[t]here already exists an overwhelming data base which: (i) clearly demonstrates that the Outfall 001 discharge to Gudgeon Brook is not toxic, and (ii) provides the basis for an immediate reduction of WET testing levels from the quarterly frequency proposed by EPA to annual testing.”<sup>170</sup> EPA has not responded to this argument. Now there are over eight *additional* years of quarterly WET testing. Indeed, whereas Invensys was able to reference nine years’ worth of data in 2003, its position is now supported by additional years of WET test results. As noted above, in the 13 years since the 1997-1998 drain line cleanout, all WET tests for both species have showed 100% survival, except for the test conducted in the 1st quarter of 2002, where *C. dubia* showed 83% survival. Thus, the available information *still* indicates that Invensys’ discharges are not acutely toxic to humans, aquatic life, or wildlife, and the frequency of WET testing should be reduced now to once per year,<sup>171</sup> if not eliminated entirely.<sup>172</sup>

**Response IS #14:** Previous test results are all based on acute toxicity testing only and do not measure sub lethal effects on growth and reproduction (i.e. chronic toxicity). If a demonstration can be made that the discharge(s) consistently do not show acute or chronic toxicity, EPA may reduce the toxicity monitoring requirements. See Permits Part I.A.1.a footnote 10 & I.A.1.b footnote 10.

**Comment IS #15:** EPA has added new details since the 2003 Draft Permit, which render the already excessive monitoring requirements more onerous still. Specifically, the current draft requires all sampling to take place “at the same time of day and the same day(s) of the week for each month,”<sup>173</sup> and toxicity samples are now mandated to be collected “in the first full week” of the listed months.<sup>174</sup> EPA has provided no basis for these restrictions. Invensys requests that these arbitrary restrictions be removed the final permit.

**Response IS #15:** The requirement is not arbitrary and is designed to ensure that discharge sampling is representative. The requirement prevents selective sampling of discharges designed to avoid certain discharge conditions. As stated in the Fact Sheet, routine sampling, along with the reporting of precipitation data, will ensure that the reported discharge data will reflect both dry weather and wet weather conditions while reducing the total number of required sampling events and significantly reducing the logistical costs inherent in conducting targeted wet weather

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one year of testing, the monitoring frequency could be reduced from quarterly to annually.”); September 30, 1991 Memorandum from Paul Hogan to Richard Chretien (Attachment 16 hereto) (“the permittee could request, after one year of ‘passable’ data, a lessening of the toxicity monitoring requirement to once per year”).

<sup>170</sup> 2003 Comments, Table 1, p. 5, No. 5; see also pp. 3 & 7.

<sup>171</sup> Various NPDES permits require annual WET testing, including the aforementioned permits issued to the MBTA in Somerville and Clean Harbors in Braintree.

<sup>172</sup> See the aforementioned final NPDES permits issued to Wyman Gordon, Logan International Airport, and Cornell-Dubilier, none of which require WET testing.

<sup>173</sup> 2011 Draft Permit, pp. 3 & 6, n.1.

<sup>174</sup> *Id.* at p. 4, n.10 & p. 7, n.10.

sampling. Note also that the permit specifically authorizes occasional deviations from the routine sampling program. See Permit Parts I.A.1.a footnote 1 & I.A.1.b footnote 1.

**Comment IS #16:** The 2011 Draft Permit does not include a schedule for compliance with the extremely stringent limitations established therein. While Invensys strenuously objects to the need for the numeric permit limits proposed in the 2011 Draft Permit, rather than BMPs, the Agency's failure to include a reasonable compliance schedule also warrants a response.

The 2003 Draft Permit included a one-year schedule of compliance. In its 2003 Comments, Invensys noted that the proposed one-year compliance schedule was unreasonable and that construction of any of the available methods of achieving compliance with the permit limits could not be completed within the one year time frame. Accordingly, Invensys requested that a three-year compliance schedule be incorporated in the final permit.<sup>175</sup>

Rather than responding to Invensys' request for a more reasonable schedule of compliance, Region 1 has eliminated any schedule of compliance from the 2011 Draft Permit. Region 1 has provided no justification for the failure to include a compliance schedule in the 2011 Draft Permit,<sup>176</sup> nor is there anything in the record provided to Invensys to suggest that Region 1 even considered the impact of such removal.<sup>177</sup> A compliance schedule should be included in the final Permit.

EPA's own guidance calls for the inclusion of schedules of compliance in the circumstances of this case. First, EPA guidance documents make clear that compliance schedules are allowed for effluent limitations based on standards adopted after July 1, 1977 if a state has indicated in its water quality standards that it intends to allow them.<sup>178</sup> The relevant state regulations squarely allow for schedules of compliance as a matter of Massachusetts law, providing that "[a] permit may, when appropriate, specify a schedule leading to compliance with the Massachusetts and Federal Clean Water Acts and regulations."<sup>179</sup> The regulations make clear that incorporation of a

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<sup>175</sup> 2003 Comments, p. 15.

<sup>176</sup> Region 1 states in the Fact Sheet that "[c]ompliance schedules and deadlines not in accordance with the statutory provisions of the CWA cannot be authorized by a NPDES permit." Fact Sheet, p. 6. However, this statement relates to the use of schedules for compliance with technology based standards, and is not applicable to the water quality-based limits imposed in the 2011 Draft Permit.

<sup>177</sup> In re Wash. Aqueduct Water Supply Sys., 11 E.A.D. 565, 566 ("the administrative record must reflect the permit issuer's 'considered judgment,' meaning that the permit issuer must articulate with reasonable clarity the reasons for its conclusions and the crucial facts it relied upon in reaching those conclusions").

<sup>178</sup> See May 10, 2007 Memorandum from James A. Hanlon to Alexis Strauss regarding Compliance Schedules for Water Quality-Based Effluent Limitations in NPDES Permits (the "Hanlon Memo"). See also Manual at pp. 9-8 - 9-9.

<sup>179</sup> 314 CMR 4.03(1)(b).

schedule of compliance is appropriate to afford a permittee additional time to comply with new permit limitations.<sup>180</sup>

Second, factors to be considered in determining whether a compliance schedule is appropriate weigh heavily in favor of including such a schedule here. The applicable Massachusetts regulations allow for inclusion of a schedule of compliance where “the permittee either cannot comply with such permit requirements or limitations, or there is insufficient information available to determine whether the permittee can comply”.<sup>181</sup> Further, relevant Agency guidance notes a number of factors that are relevant to whether inclusion of a compliance schedule is appropriate in a specific permit, including: whether the discharger has already had to meet the WQBELs under prior permits; and, the need for “modifications to treatment facilities, operations or measures to meet the WQBELs” and the time those steps would take.<sup>182</sup> Consideration of these factors points strongly in favor of including a compliance schedule in the present case.

As noted in the attached report by Woodard & Curran, Invensys will be unable to immediately comply with the water quality-based effluent limitations proposed in the 2011 Draft Permit upon the effective date of the permit, if compliance with such limits is even technologically feasible. As discussed in Section III.B.2.c, *supra*, in order to comply with the proposed limitations Invensys would be required to install complex, non-conventional controls, including complicated, multi-phase treatment systems, accompanied by the construction of equalization tanks, the rehabilitation of existing drain lines or replacement of storm water drainage system. Estimates of the costs of the technologies that would be required to be implement range from \$6 million to \$17 million in capital costs, plus \$300,000 to \$900,000 in annual operation and maintenance costs. Invensys anticipates that the performance of necessary characterization and treatability studies, preparation and permitting of designs, and completion of construction will take approximately 2 to 3 years. More importantly, it is not even known at this time whether any of the potential approaches would even be able to attain compliance. To require immediate compliance with strict numeric effluent limits when it is not even known if compliance is possible is not just unreasonable and unfair; it borders on the absurd.

Accordingly, Invensys requests that, if Region 1 were to issue a final permit in a form similar to the 2011 Draft Permit, such permit include a compliance schedule providing for three (3) years to come into compliance with the effluent limits.

**Response IS #16:** EPA understands that implementation of measures necessary to meet the permit limits will take time, and is open to development of a compliance schedule. However, EPA does not agree that the compliance schedule must be included within the permit itself, as opposed to an administrative compliance order. While the agency is authorized to include a

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<sup>180</sup> *Id.* Specifically, the relevant regulations make clear that the purpose of a compliance schedule is to allow the “permittee adequate time to comply with one or more permit requirements or limitations that are based on new, newly interpreted or revised water quality standards that became effective after both issuance of the initial permit for a discharge and July 1, 1977.”

<sup>181</sup> *Id.*

<sup>182</sup> *Hanlon Memo*, pp. 2-3.

compliance schedule in permits, it is not required to do so. (“A permit *may, when appropriate,* specify a schedule leading to compliance with the Massachusetts and Federal Clean Water Acts and regulations.” 314 CMR 4.03(1)(b). Due to the complexities and uncertainties associated with implementing measures that may be necessary to comply with the permit limits, the agency believes that an appropriate administrative compliance schedule should be developed by EPA’s compliance program upon issuance of the final permit and after consultation with Invensys Systems as appropriate. Pursuant to its common practice, EPA Region 1 regularly issues administrative compliance orders to NPDES permittees in Massachusetts to provide compliance schedules for newly-reissued permits.

**Comment IS #17:** Even if it were acceptable for EPA to rely on 2001-2002 pre-cleanout data in establishing permit conditions for Outfall 002 (which it is not), the 2001-2002 data do not support EPA’s imposition of an acute criterion for lead. The 2011 Draft Permit imposes an acute criterion of 33.8 ug/l. However, as the Fact Sheet explains, “[a] review of the effluent data submitted by the facility show concentrations ranging from 6.0 ug/l to 23.4 ug/l during wet weather, and 32 ug/l during dry weather”<sup>183</sup> – that is, *never* over the 33.8 ug/l limit.<sup>184</sup> Thus, inconsistent with all its other explanations demonstrating that numeric water quality-based effluent limits are being imposed because at least one exceedance has taken place,<sup>185</sup> EPA has imposed a numeric acute criterion for lead where there are no data demonstrating even one exceedance. Notably, EPA has taken the affirmative step of eliminating from the present permit a numeric acute criterion for lead in the Outfall 001 discharge. The data mandates that it must do the same for Outfall 002.

**Response IS #17:** The question is not whether an exceedance has been recorded in the discharge, but rather whether the discharge has the *reasonable potential* to cause or contribute to an excursion above a state water quality standard. EPA has however dropped the maximum daily lead limit for the Robinson Brook discharge as the monthly average limit (1.3 ug/l) is stringent enough that compliance with it will ensure that the acute criteria is not exceed in the receiving water. Retention of the monthly average limit is justified given the frequent exceedances (even post-drain-cleanout) of 1.3 ug/l in individual sampling events. See Attachment C.7-B.

**Comment IS #18:** Between 2003 and 2010, EPA eliminated bacteria monitoring from the permit requirements for Outfall 001, stating that “a review of the discharge data indicate[d] that there is no reasonable potential to exceed criteria.”<sup>186</sup> However, EPA has now added a bacteria

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<sup>183</sup> Fact Sheet, p. 14.

<sup>184</sup> This is also true for the more current data which EPA attaches to the Fact Sheet but neglects to consider in establishing limits on the Outfall 002 discharge. *Id.* at Attachment C.7-B.

<sup>185</sup> As discussed in Section III.C.1, *supra*, Invensys submits that this method is itself inappropriate, as it does not constitute the required reasonable potential analysis.

<sup>186</sup> 2010 Fact Sheet, p. 7.

limit and monitoring requirement for Outfall 001,<sup>187</sup> with requirements more onerous than pre-existing versions. Specifically, EPA has reduced the average monthly limit to 126 cfu/100 ml and drastically increased the frequency of required sampling, from once per month in wet weather from April through October, to once per week during the same period, regardless of weather conditions.<sup>188</sup>

EPA's stated basis for adding these stringent requirements into the permit for Outfall 001 is unspecified "discharge data submitted by the facility," which allegedly indicate recent exceedances, "although the majority of the data is still within the permit limits."<sup>189</sup> In reality, a few exceedances of a given limit do not necessarily correspond to a reasonable potential to exceed. As discussed in Section III.C.1, *supra*, EPA may not impose numerical WQBELs without demonstrating a reasonable potential to exceed the WQC. Moreover, to the extent that any high bacteria levels do exist in the Outfall 001 discharge, such levels are likely to stem from upstream, off-site drainage conditions out of Invensys' control (e.g., wild animal or pet waste affecting storm water, septic systems affecting groundwater, etc.). Finally, EPA's new bacteria requirements for Outfall 001 are inconsistent with the bacteria requirements EPA has included in other permits, most of which are report-only (i.e., do not include numeric criteria) and do not include onerous weekly sampling, if any bacteria limits exist at all.<sup>190</sup> For instance, the 2007 Logan Airport Permit imposes no numeric bacteria limit and requires its report-only monitoring once per month,<sup>191</sup> despite the fact that – unlike in the present case – bacteria was one of the central pollutants of concern for the site given "the bacteria problem identified in the Logan area."<sup>192</sup>

For the foregoing reasons, Invensys respectfully requests that the bacteria limit and monitoring requirement for Outfall 001 be removed, consistent with the Outfall 002 portion of the permit. If EPA concludes that bacteria must be monitored in the Outfall 001 discharge, Invensys respectfully submits, in the alternative, that the permit requirements should conform to other

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<sup>187</sup> As to the Outfall 002 discharge, EPA has done the opposite for bacteria, eliminating all bacteria sampling since the 2010 draft, with no explanation for why it is doing so or why the two outfalls are being treated differently.

<sup>188</sup> 2011 Draft Permit, p. 2 & p. 3, nn.5-6.

<sup>189</sup> Fact Sheet, p. 10.

<sup>190</sup> Many permits include *no* bacteria limit. E.g., 2009 Final GE Permit, *supra*; 2008 Final Wyman Gordon Permit, *supra*; CSX Transportation Permit No. MA0025704, *supra*; Texas Instruments Permit No. MA0001791, *supra*; Clean Harbors Permit No. MA0031551, *supra*; Cornell-Dubilier, Permit No. MA0003930, *supra*; Eastman Gelatine Permit No. MA0003956, *supra*; Saint-Gobain Abrasives, Inc. and Saint-Gobain Ceramics & Plastics, Inc. Permit No. MA0000817, *supra*.

<sup>191</sup> 2007 Final Logan Airport Permit, *supra*, at pp. 3, 7, 20 & 22. See also MBTA Permit No. MA0003590, *supra*, at pp. 2 & 3, n.4 (requiring report-only monitoring once per month); Solutia Permit No. MA0001147, *supra*, at pp. 6, 14, 18, 22 & 26 (requiring report-only monitoring once per year).

<sup>192</sup> EPA's Responses to Comments on the Logan Airport Permit, available at <http://www.epa.gov/region1/npdes/logan/pdfs/finalma0000787rtc.pdf>, p. 148.

Region 1 permits by requiring, at most, report-only monitoring once a month during the April-October period identified by EPA as relevant.

**Response IS #18:** The bacteria limit for outfall 001 has been removed from the permit. The final permit contains a report-only requirement.

The current Massachusetts bacteria criterion for Class B waters is a monthly geometric mean of 126 colonies/100 ml. See 314 CMR 4.05(3)(b)(4). Data presented in the Fact Sheet indicate that the two most recent samples exceeded the applicable fecal coliform bacteria criteria. Due to the uncertainty over the source of the bacteria and a change in the applicable bacteria indicator, the final permit includes a monitor only requirement of once per month. This still reflects an increased frequency relative to the previous permit. If monitoring indicates that bacteria are at levels such that there is a reasonable potential for criteria to be exceeded as a result of discharges from Invensys, then a water quality based permit limit will be included in a future permit action. If Invensys wishes to assert at some point that the bacteria content of its discharges to Gudgeon Brook are influenced by offsite bacteria, it is the responsibility of the discharger to provide documentation quantifying such offsite contributions.

**Comment IS #19:** In another example of unnecessary stringency in the present Draft, EPA has unreasonably removed from the pH limits the words “unless exceeded due to natural causes” – a phrase that appears in many other Region 1 NPDES permits imposing pH limits.<sup>193</sup>

The lower pH levels observed in the Outfall 001 effluent (5.5-6.4) are not atypical for eastern Massachusetts and conform to common, regionally-occurring surface water conditions resulting from acid rain. Indeed, the Massachusetts Acid Rain Monitoring (ARM) Program, which has been monitoring pH and alkalinity of Massachusetts ponds, lakes and streams since 1983, reported in June 2011 that pH levels in Massachusetts streams range from 3-7.8, with many reported values well below the lower limit imposed in the 2011 Draft Permit (i.e., 6.5).<sup>194</sup> The permit should specify a range of pH levels that, at a minimum, reflects regional water quality, rather than imposing a national recommended WQC default range that does not reflect the regional conditions.

EPA has previously recognized the propriety of such an approach, not only in the context of other recent NPDES individual storm water permits,<sup>195</sup> but even in prior iterations of this very same permit. Specifically, the 1991 Permit included a provision that allowed for pH to be “not

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<sup>193</sup> E.g., 2009 Final GE Permit, *supra*, at p. 17, n.21; MBTA Permit No. MA0003590, *supra*, at p. 4, n.b; Eastman Gelatine Permit No. MA0003956, *supra*, at p. 5, n.4; Solutia Permit No. MA0001147, *supra*, at p. 34, n.b.

<sup>194</sup> Acid Rain Monitoring Report, FY2011 End of Fiscal Year Report (June 30, 2011), available at [http://www.umass.edu/tei/wrrc/arm/ARM\\_FY11\\_Annual\\_Report.pdf](http://www.umass.edu/tei/wrrc/arm/ARM_FY11_Annual_Report.pdf) (last visited October 31, 2011), pp. 9-12, Table 5.

<sup>195</sup> See, e.g., 2007 Final Logan Airport Permit, *supra*, at pp. 3, 7 & 24, n.11 (6.0 to 8.5); Texas Instruments Permit No. MA0001791, *supra*, at pp. 2 & 3, n.b (“not more than 0.5 units outside of the natural background range”); Saint-Gobain Abrasives, Inc. and Saint-Gobain Ceramics & Plastics, Inc. Permit No. MA0000817, *supra*, at pp. 2-3, n.b (same); Clean Harbors Permit No. MA0031551, *supra*, at p. 5, n.10 (“If the pH results of the discharge are outside the range of 6.5 – 8.5 s.u. due to background conditions, the pH must be within 0.2 s.u. of the rainfall’s pH level.”).

more than 0.5 units outside of the naturally occurring background range.”<sup>196</sup> Therefore, the current text of footnote 4 on pages 3 and 6 should be revised as follows:

The pH of the effluent shall not be less than 6.5 standard units (SU), nor greater than 8.3 SU at any time, unless these values are exceeded due to natural causes. The pH shall be no more than 0.5 units outside the natural background range. To demonstrate that the pH values of the effluent are outside the permitted pH range due to natural causes, the permittee must show that pH measurements of the source water and the effluent are the same. When the values are exceeded due to natural causes, documentation of such conditions must be submitted by the permittee with the monthly DMR and recorded in the SWPPP.

Such an approach is consistent with EPA’s comment in the current Fact Sheet that Invensys should “submit data along with the discharge monitoring reports documenting the extent to which rainwater pH [a]ffects the pH of the final discharges,”<sup>197</sup> but it also avoids the unnecessary stringency EPA has introduced into the 2011 Draft Permit by removing the common natural exceedances clause.

**Response IS #19:** The pH limit is not based on a “national recommended WQC default range” but rather is based on the Massachusetts Surface Water Quality Standards. The standards require that the pH in the receiving waters “shall be in the range of 6.5 through 8.3 standard units and not more than 0.5 units outside of the natural background range.” 314 CMR 4.05(3)(b)(3) (emphasis added). The permit limit has been established to ensure that the discharge does not contribute to an exceedance of the allowable receiving water range of 6.5 - 8.3 standard units. The criterion for pH does not allow for an exception for natural causes. While it is true that some older EPA NPDES permits issued in Massachusetts included such exceptions, EPA’s more recently issued permits track the Massachusetts Surface Water Quality Standards more accurately and do not contain the natural causes language (see permits for Sprague Operating Resources, Boston and Maine Corporation, MW Custom Papers, Radiant Fuel Company; all available from [http://www.epa.gov/region1/npdes/permits\\_listing\\_ma.html](http://www.epa.gov/region1/npdes/permits_listing_ma.html)). The standards do allow for a site specific adjustment of the instream criteria based on natural background levels in the receiving water but no such determination has been made by MassDEP or approved by EPA.

While acid rain does not represent “natural” conditions, EPA recognizes that acid rain may be a contributing factor in a discharge exceeding the allowable pH range. If the permittee believes that an exceedance of the limit is due primarily to the pH levels in precipitation then the permittee may submit supporting documentation, including concurrent measured pH values for precipitation, with the monthly monitoring reports.

**Comment IS #20:** The Agency has not provided a reasonable basis for requiring monitoring for mercury at Outfall 002. The Agency acknowledges that most data collected from the Outfall 002 drainage area indicated non-detectable levels for mercury. The Agency then cites to two

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<sup>196</sup> 1991 Permit, pp. 2 & 3, n.a.

<sup>197</sup> Fact Sheet, p. 10.

sampling results – one from 2002 collected *prior* to the drain cleaning and one from 2003 – which indicated detectable levels for mercury, as the basis for imposing the monitoring requirement.<sup>198</sup> However, the samples to which the Agency refers were collected at catch basin number 24, an internal outfall. As such, the sampling results are not representative of the overall Facility discharges and form an insufficient basis for imposing a monitoring requirement for mercury at Outfall 002.

**Response IS #20:** The sampling results are, respectively, 1.8 ug/l (pre-drain-cleanout) and 170 ug/l (post-drain-cleanout). The chronic criterion is 0.77 ug/l and the acute criterion is 1.4 ug/l. The post-drain-cleanout result is therefore 220 times higher than the acute criterion. Invensys has not provided additional mercury sampling data (whether from an internal outfall or anywhere else) in the past 10 years that it has been discharging since that 170 ug/l value was measured. Levels detected in an internal outfall that, in one case, are over two orders of magnitude higher than the water quality criteria, coupled with the lack of any data from the final outfall, are sufficient reason to incorporate the required monitoring.

**Comment IS #21:** It is unreasonable for EPA to require Invensys to submit data from the National Weather Service, which is equally available to EPA. Invensys highlighted this point in both 2001<sup>199</sup> and 2003,<sup>200</sup> but EPA has still failed to respond in any way to the argument. Invensys respectfully requests that records of the National Oceanic and Atmospheric Administrative (NOAA) for Taunton be used instead.

**Response IS #21:** It is appropriate for EPA to require the reporting of information necessary to determine compliance with permit conditions as well as information necessary to determine if permit conditions are sufficient to ensure attainment of water quality standards. The effort and cost involved in obtaining and organizing this NWS data from the Internet, while not zero, is small and not overly burdensome. Moreover, it is more appropriate for the discharger, rather than the public in general, to bear this small cost.

It is not clear why the commenter has requested that the data be reported for Taunton. The requirement remains in the permit but has been modified to require that the data be provided for the closest location to the facility for which National Weather Service data is available.

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<sup>198</sup> *Id.* at p. 14.

<sup>199</sup> October 30, 2001 Letter from Paul Ahearn to Janet Labonte, Exhibit 2, Comment 6.d [“The requirement to submit National Weather Service data seems to be excessive in view of the fact that such data are readily available to the Agency via the internet (i.e., the same data source that the Company would access to compile the information.)”] Please explain rationale/need for this requirement.

<sup>200</sup> 2003 Comments, Table 1, p. 1, No. 4 [“No justification given by EPA. Compilation and submittal of weather data for 3 days prior to, and the day of, each sampling event is excessive and unnecessary since NWS data is readily available to EPA via the internet (i.e., the same data source that the Company would access to compile the information).”]