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NWS EARLE
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Let's protect our earth

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
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(609) 633-1408
Fax # (609) 633-1454

Captain Walter M. Migrala, Jr.
Commanding Officer
Naval Weapons Station Earle
Colts Neck, NJ 07722-5000

Dear Captain Migrala:

Re: IRP Phase III RI Work Plan Naval Weapon Station Earle (NWSE)
Navy's Response to NJDEP Original Comments
Final Quality Assurance Project Plan (QAPP)
Final Health and Safety Plan

The New Jersey Department of Environmental Protection (NJDEP) has reviewed the above referenced documents. The documents as submitted have incorporated some of NJDEP's comments but still fail to address several important items. The issues that the Navy still has not addressed are reiterated below. They must be incorporated into a revised work plan and Quality Assurance Project Plan and resubmitted to the NJDEP prior to the commencement of any field work. The Health and Safety Plan has incorporated the Department's comments, but please be aware that the NJDEP does not approve HASP's.

If you have any questions please call me at (609) 633-1455.

Sincerely,

Joseph Freudenberg, Case Manager
Bureau of Federal Case Management

kj

c: Paul Ingrisano, USEPA
Jerry Hoover, NORDIVNAVFAC
Linda Welkom, BGWPA/DWR
Kenneth Petrone, BEERA/DHSM

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RI Work Plan Comments

GENERAL RECOMMENDATION

The following issues are applicable and relevant to the NWSE facility investigation.

1. The landfills must be investigated, and an attempt made t quantify and qualify their respective contents. Detailed below are site-specific recommendations regarding the landfill investigations.

2. In general, if the proposed soil sampling and ground water investigation confirm existing, suspected and/or additional contaminants, further investigations will be required to delineate the vertical and horizontal extent of these contaminants at and/or emanating from the site(s) and/or the facility.

RECOMMENDATIONS

1. The Navy states that, "it does not feel that full scan analyses are necessary for soils because where soil sampling is proposed, site histories are fairly well known. Conversely, sampling of landfill areas is not proposed because of their inherent inhomogeneity." This line of reasoning is inappropriate and not acceptable to the NJDEP. Several times in different reports generated by the Navy for this project it has qualified comments regarding contents of a landfill or disposal practices as being the recollections of old timers who worked at the facility. In order to generate a feasibility study and remedial alternatives appropriate for the sites and facility, a RI must provide conclusive, factual, concrete data. It is therefore, recommended that the Navy re-evaluate the soils investigation program for the facility. Actual soils data must be collected from all sites under investigation. In addition, the use of test pits to visually inspect and sample the landfills must be incorporated into the revised soils investigation program.

test pits agreed to last TRC

2. Several of the site maps are still missing scales.

will address in Round II

3. Conventional landfill parameters must be included in the analyses of all ground water samples from the landfill sites.

4. ITEM 7:

OK

The well construction diagrams provided in the Final draft Quality Assurance Project Plan (QAPP), dated June 1990, page 2-9 are still incorrect. (See Attachment #1, for the appropriate monitor well specifications.)

5. ITEM 8:

The ground water cleanup criteria which will be used in remediation of the NWSE facility will be determined based upon the following Applicable or Relev nt and Appropriate Requirements (ARARs): the New Jersey Ground Water Quality Criteria, the New Jersey Drinking Water Stand rds and the appropriate corresponding

federal regulations. Chemical specific ARARs based upon the ground water quality data collected from onsite monitor wells will be also be developed for the NWSE facility.

6. ITEM 16F:

period of 2 weeks before were ready

Synoptic ground water levels will be taken upon completion of the installation of all proposed monitor wells and piezometers. These water levels will be used to prepare ground water contour maps for the sites. The monitor wells and piezometers must be allowed to equilibrate with the aquifer after installation and development, and prior to taking water level measurements. The proposed time limit of 30 hours may not be a sufficient equilibration period.

7. ITEM 17:

The NJDEP must be notified a minimum of two weeks prior to the removal of any piezometers. It may be necessary to continue monitoring these points longer than the time frame stated in this section of the subject document.

SITE SPECIFIC RESPONSE COMMENTS

1. Site 4:

- The location of the 4 sediment samples proposed must be shown on Fig. 5-3.

- Fig. 5-3 shows the location for a Soil Boring, but the revised analytical parameter table does not specify any sub-surface samples to be taken. The samples from the proposed boring must be specified in the revised table.

2. Site 7:

Field Check below comments. Another creek may be closer.

Item 6a, of this section of the response document discusses Compton Creek's approximate location and a drainage way leaving the site. Reportedly, this drainage way is depicted on the revised map in the northern portion of Site 7. (Attachment #2) There is no drainage way depicted on the referenced map, the contractor must revise the figure for Site 7 to incorporate this missing item.

1412 Action

- The analytical parameters for the post excavation soil samples at the UST area must be specified.

Done

- As the Navy response indicates that surface water and sediment samples will be collected at this site the revised parameter tables must specifies such samples.

3. Site 10:

- The proposed surface water and sediment sample locations must be shown on the site figure.

4. Site 11:

- "Proposed Soil Borings" are shown on Fig. 5-7, but the revised parameter tables do not specify any subsurface samples. The samples from the proposed boring must be specified in the revised table.

5. Site 19:

- Semi-volatile Organic Compounds and PCB's must be included as analytical parameters for the soil borings proposed at the "small pines" area and the stream sediment locations.

- Previous soil sampling events have documented high levels of target analyte list (TAL) metals, which are the results of past disposal and discharge practices. The Navy states that the results of the proposed sampling will be conclusive in determining whether metals contamination is extensive." Furthermore, the Navy states that field screening at this stage of activity would not contribute very much to the program.

  However, the Department feels as follows: If an investigation tool exists that can assist in the delineation of this metal contamination problem the use of this tool should be considered. X-ray fluorescence has been used as an effective scanning technique at other CERCLA sites to delineate metal contamination in soil. It's applicability as a sample pre-screening tool during this site's soil investigation for metals should not be superficially dismissed.

6. Site 20:

- The two composite waste pile samples must be analyzed for the full TCL/TAL (minus pesticides); Separate discrete samples must be collected for the VOC analyses.

- A minimum of 4 of the drainage swale samples must also be analyzed for the full TCL/TAL (minus pesticides).

7. Site 22:

- The proposed soil borings in the discolored/stained soils areas must be analyzed for full TCL/TAL.

- Analytical parameters for <u>one</u> sediment sample from each drainage ditch must include PCB's and semi-volatile organic compounds.

FINAL QUALITY ASSURANCE PROJECT PLAN

RECOMMENDATIONS

The following recommendations are listed in the same order as they appear in the subject document.

1. Table 1-3, Maximum Concentrations of Contaminants for Characteristics of EP Toxicity Phase III, NWS Earle, New Jersey, page 1-13:

   Was this changed? Agree

   This table, as submitted, does not contain the appropriate and relevant hazardous waste classification criteria. The U.S. Environmental Protection Agency (USEPA) has revised and replaced the EP Toxicity Procedure and its associated criteria with the Toxicity Leaching Procedure (TCLP) and its relevant criteria. The TCLP incorporates other prevalent contaminants in addition to metals. A new table must be generated which includes the EPA TCLP compound list and the maximum concentrations above which a media is classified as a hazardous waste.

2. Table 1-3, (continued) NJDEP Guidelines[a] for Evaluating Possible ECRA Cleanup Requirements, page 1-14:

   The table as presented in the subject document is incorrect. The following items must be revised.

   1. The table is not a continuation of Table 1-3, it should be labeled as a separate table.

   2. The footnote "a" referencing this table to the New Jersey Ground Water Quality Standards does not apply to the criteria presented in the subject table. In addition the citation for the New Jersey Ground Water Quality Standards is N.J.A.C. 7:9-6 at seq., not N.A.J.C 7:9-6.

   3. The ECRA Cleanup Criteria presented are not applicable for ground water cleanup at NWSE. The ground water cleanup criteria which will be used in remediation of the NWSE site are the New Jersey Ground Water Quality Criteria for ground waters classified as GW-2. Some of these criteria are presented in Table 1-2 of the subject document. In addition, chemical specific Applicable or Relevant and Appropriate Requirements (ARARs) will be developed for those contaminants that currently have no promulgated maximum contaminant levels (MCLs) but, have been identified as contaminants in the ground water beneath the NWSE facility.

3. Section 2.2.1, Test Borings, page 2-2:

   The soil samples will be lithologically logged using the Burmeister Soil Classification System, not the Unified Soil Classification System.

   In addition, the following items will be addressed and incorporated into the test boring operations.

1. Obtain drilling permits for all soil borings pursuant to N.J.A.C. 58:4A-14.

2. Install soil borings under direct supervision of a New Jersey licensed well driller and a qualified geologist.

3. Decontaminate soil boring and sampling equipment between individual samples and borings according to the approved decontamination plan.

4. Permanently seal all soil borings (those not used for monitor well installations) using a certified well sealer, within 12 hours of completion of each boring.

4. Section 2.3, Monitor Well Installation and Testing, page 2-3:

All monitor well casing and monitor well screens will be steam cleaned inside and out until all traces of oil and grease from the factory are removed; these materials shall then be stored (wrapped in plastic) in such a manner to preserve it in this pristine condition till installation.

5. Figure 2-3, Typical Monitor Well Construction, page 2-9:

The figure presented is incorrect and must be revised in accordance with attachment number 1.

6. Section 2.4, Water Level Data Collection, page 2-8:

Synoptic water level measurements shall not be taken prior to allowing the monitor well to equilibrate with the aquifer. The equilibration period will start after the monitor well is complete and has been developed.

7. Section 2.5.1, Ground Water Samples, page 2-11:

All field sampling equipment (bailers etc.) shall be laboratory cleaned, wrapped and dedicated to a particular sampling point, unless written permission from the Department for field cleaning is obtained prior to the collection of any samples.

8. Section 2.5.4.4, Water and Soil Sampling Equipment Decontamination, page 2-15:

1. Decontamination protocols for spilt spoon samples, pumps, etc. are as follows:

   1. Non-phosphate detergent
   2. Tap water rinse
   3. Distilled/deionized water rinse
   4. 10% Nitric acid rinse *
   5. Distilled/deionized water rinse *
   6. Acetone (pesticide grade) rinse
   7. Total air dry or nitrogen blow out
   8. Distilled/deionized water rinse

   * Only if sample is t be analyzed for metals

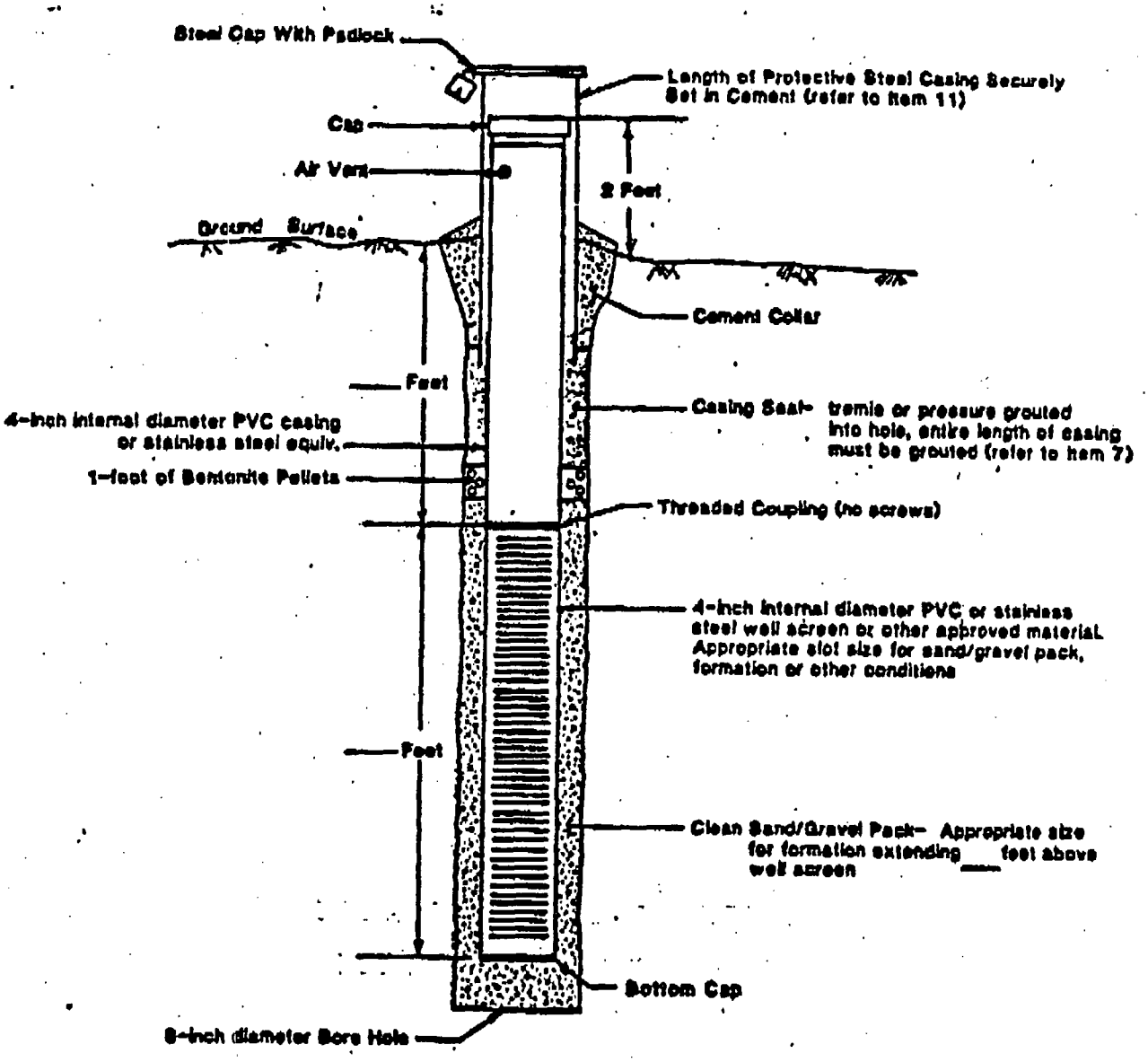
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
MONITOR WELL SPECIFICATIONS FOR UNCONSOLIDATED FORMATIONS

Attachment #1

SITE NAME : _____

LOCATION : _____

DATE : _____



NOT TO SCALE

NJGS Revised 9-87

MONITORING WELL REQUIREMENTS FOR UNCONSOLIDATED FORMATIONS
Revised 9/87

1. Notification to the NJDEP is required two weeks prior to drilling.

2. State well permits are required for each monitoring well constructed by the driller. The well permit tag must be permanently affixed to each monitoring well.

3. Copies of the site specific well specifications must be maintained at the drilling site by the driller.

4. The monitoring well must be installed by a New Jersey licensed well driller.

5. Monitoring well design must conform with NJAC 7:9-7, 8, and 9.

6. The borehole diameter must be a minimum of 4 inches greater than the casing diameter.

7. Acceptable grouting materials are:

   Neat Cement - 6 gallons of water per 94 pound bag of cement.

   Granular Bentonite - 1 gallon of water per 1.5 pounds of bentonite.

   Cement-Bentonite - 8 gallons of water to 5 pounds of bentonite dry mixed per 94 pound bag of cement.

   Cement-Bentonite - 10 gallons of water per 8 pounds of bentonite water-mixed with a 94 pound bag of cement.

   Non-expandable cement - 7.5 gallons of water per 1/2 teaspoon of aluminum hydroxide mixed with 4 pounds of bentonite and 94 pounds of cement.

   Non-expandable cement - 7 gallons of water per 1/2 teaspoon of aluminum hydroxide mixed with 94 pounds of cement (Type I or Type II).

8. Potable water must be used for mixing grouting materials and drilling fluids.

9. Only threaded joints are acceptable as couplings.

10. The driller must maintain an accurate written log of all materials encountered, record construction details for each well, and record the depths water bearing zones. This information must be submitted to the Bureau of Water Allocation as required by N.J.S.A. 58:4A.

11. A length of protective steel casing with a locking cap must be securely set in cement around the well casing. Flush mount monitoring wells are acceptable provided they have manholes, locking caps, and seals to prevent leakage of surface water into the well.

Attachment #5

WESTON

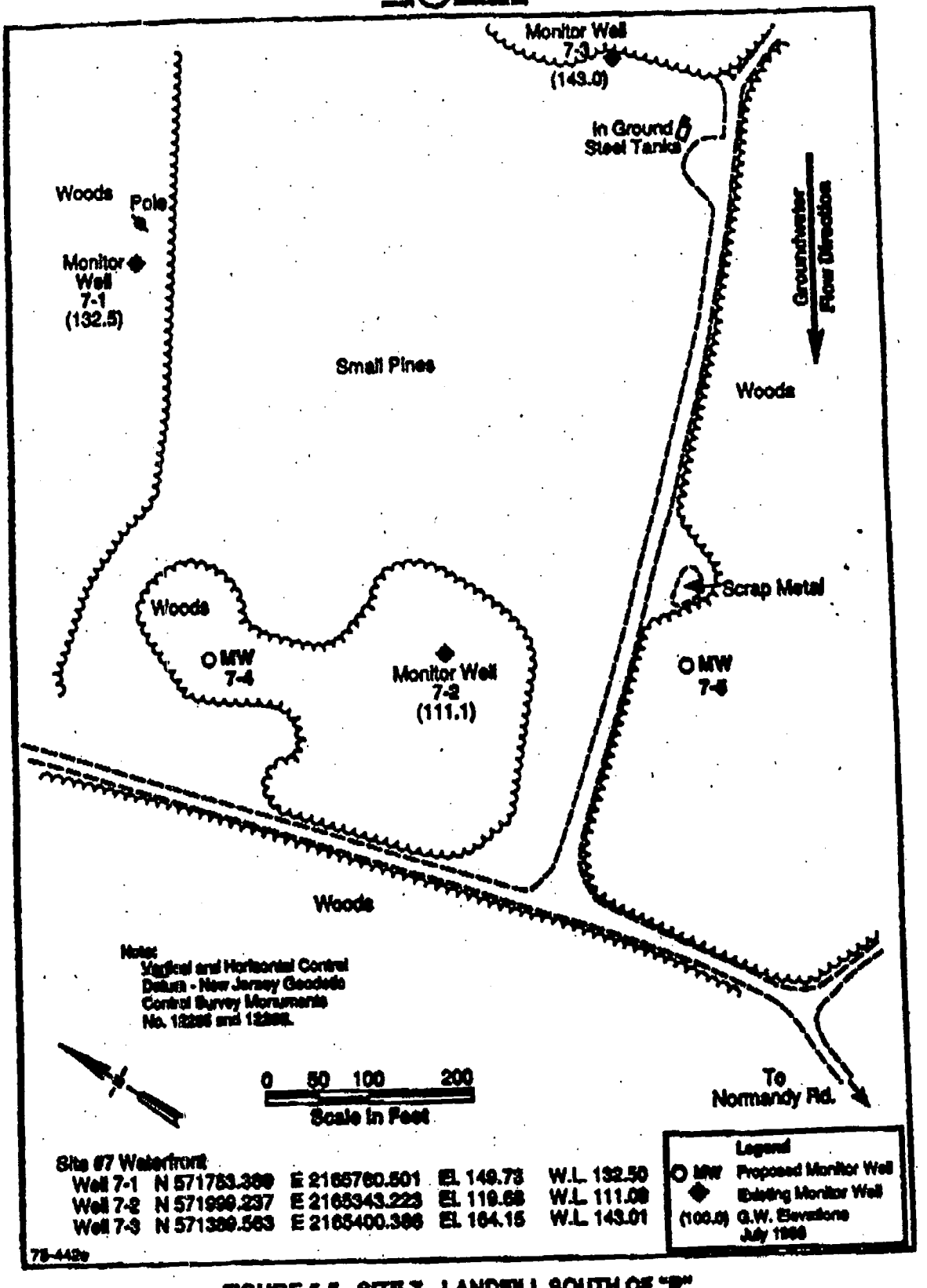


FIGURE 5-5 SITE 7 - LANDFILL SOUTH OF "P"
BARRICADES MONITOR WELL LOCATIONS

12. Top of each well casing (excluding cap) must be surveyed to the nearest 0.01 foot by a New Jersey licensed surveyor. The survey point must be marked on each well.

13. Wells must be developed to a turbidity-free discharge.

14. Modifications to designs are allowed only with NJDEP approval.

Additional Requirements (if checked):

Split Spoon Samples ( ) _____

Borehole Geophysical Logs ( ) _____

Top of Screen set _____ feet above/below water table

Dedicated Bailer (Sampler) in Well ( ) _____

Other ( ) _____

_____

_____

Notice is Hereby Given of the Following:

Review by the Department of well locations and depths is limited solely to review for compliance with the law and Department rules.

The Department does not review well locations or depths to ascertain the presence of, nor the potential for, damage to any pipeline, cable, or other structures.

The permittee (applicant) is solely responsible for the safety and adequacy of the design and construction of monitoring well(s) required by the Department

The permittee (applicant) is solely responsible for any harm or damage to person or property which results from the construction or maintenance of any well; this provision is not intended to relieve third parties of any liabilities or responsibilities which are legally theirs.