REPORTABLE EVENT RAD 1.34:

Industry Groundwater Protection Initiative (GPI) Voluntary Communication

Requirement: NEI 07-07, "Industry Ground Water Protection Initiative – Final Guidance Document" (August 2007)

Objective 2.2: Make informal communication as soon as practicable (no later than the end of the next business day) to appropriate State/Local officials, with follow-up notification to the NRC, as appropriate, regarding significant on-site leaks/spills into ground water and on-site or off-site water sample results exceeding the criteria in the REMP as described in the ODCM ...

MDA 2,000 15 20,000 (limit)

Objective 2.3: Submit a written 30-day report to the NRC for any water sample result for on-site ground water that is or may be used as a source of drinking water that exceeds any of the criteria in the licensee's existing REMP as described in the ODCM ... for 30-day reporting of off-site water sample results. Copies of the written 30-day reports for both on-site and off-site water samples shall also be provided to the appropriate State/Local officials.

Objective 2.4: Document all on-site ground water sample results and a description of any significant on-site leaks/spills into ground water for each calendar year in the Annual Radiological Environmental Operating Report (AREOR) for REMP or the Annual Radioactive Effluent Release Report (ARERR) for the RETS as contained in the appropriate reporting procedure, beginning with the report for calendar year 2006.

Time Limit	***Required Notification(s):***
END OF NEXT BUSINESS DAY	Perform voluntary informal communications to State/local offsite agencies (as determined per HR-AA-1001), NEI (GW_Notice@nei.org) and the ANI for events requiring voluntary communications as determined from the flowchart in Attachment ~~2. Complete~~ Attachment 1 and provide the information on the completed attachment to the State/local offsite agencies [NEI 07-07, Objective 2.2].
30 DAYS	Submit a voluntary written 30-day report to the NRC for any GPI water sample result for onsite groundwater that is or may be used as a source of drinking water that exceeds any of the criteria in the licensee's existing REMP as described in the ODCM for 30-day reporting of offsite water sample results. Copies of the written 30-day reports for both onsite and offsite water samples shall also be provided to the appropriate State/Local officials. [NEI 07-07, Objective 2.3].

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- Releases contained wholly inside a plant building, containment unit or an outside structure with a non-permeable surface.
- A spill or leak to a semi-impermeable or impermeable surface that is re-contained or remediated before the close of the next business day.
- Releases, leaks or spills of radionuclides directed to NPDES (NJPDES in New Jersey) permitted outfalls.
- Releases, leaks or spills of liquid Radwastes whose chemical makeup would interfere with the tritium analysis.

o Evaluation of Releases

Evaluate releases for reportability as follows:

- Review the circumstances of the release for applicability.
- Determine reportability of the spill or leak or sample result(s) using the flowchart in Attachment 2.
- Report the spill or leak or sample result(s) as required.

o End of next business day State/Local offsite agency notifications

Communication to the designated State/Local officials shall be made before the end of the next business day if an inadvertent leak or spill to the environment has or can potentially get into the groundwater **and** exceeds any of the following criteria:

- If a spill or leak exceeding 100 gallons from a source containing licensed material,
- If the volume of a spill or leak cannot be quantified but is likely to exceed 100 gallons from a source containing licensed material, or
- Any leak or spill, regardless of volume or activity, deemed by the licensee to warrant voluntary communication.

"Leak or spill" events that meet the NEI criteria shall be communicated regardless of whether or not the onsite groundwater is, or could be used as, a source of drinking water. The quantity of liquid resulting from leaks or spills of solid materials, waste or steam leaks should be evaluated with respect the criteria above.

"Source containing licensed material" means a liquid, including steam, for which a statistically valid positive result is obtained when the sample is analyzed to *a priori* lower limits of detection (analytical sensitivity). The analytical sensitivity for identifying a source containing licensed material is, at a minimum, the licensee's lower limits of detection that are required for radioactive liquid effluents for all isotopes.

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- 4-Hour NRC ENS Notification

  The 4-hour NRC ENS notification described under Reportable Event (SAF 1.9) is not mandatory under this reportable event because:

  - The State and Local communications being performed are voluntary in nature and are not required by any Federal or State regulations, and
  - NEI and NRC are agreed that NRC will be receiving a voluntary 30-day report of the event.

  However, to verify the need for performing the 4-hour NRC ENS notification described under Reportable Event (SAF 1.9), refer to the guidance for performing voluntary reporting to the NRC in LS-AA-1400, Event Reporting Guidelines 10 CFR 50.72 and 50.73 (NUREG-1022, Revision 2).

- 30-Day NRC Report

  All groundwater samples shall be analyzed and compared to the standards and limits contained in the station's REMP as described in the ODCM. Pre-2006 ODCM requirements specify a written 30-day report to the NRC for REMP sample results that exceed any of the REMP reporting criteria. Under the GPI, a written 30-day NRC report is also required for all onsite sample results that exceed any of the REMP reporting criteria and could potentially reach the groundwater that is or could be used in the future as a source of drinking water. If the groundwater is not currently used for drinking water but is potable, each station should consider the groundwater as a potential source of drinking water (See NEI 07-07, Objective 2.2, Acceptance Criterion b, for documentation needed).

  The initial discovery of groundwater contamination greater than the REMP reporting criterion is the event documented in a written 30-day report. It is not expected that a written 30-day report will be generated each time a subsequent sample(s) suspected to be from the same "plume" identifies concentrations greater than any of the REMP criteria as described in the ODCM. The station should evaluate the need for additional reports or communications based on unexpected changes in conditions.

  The 30-day NRC report should include the information listed in NEI 07-07, Objective 2.3, Acceptance Criterion b. All written 30-day NRC reports are to be concurrently forwarded to the designated State/Local officials contacted during the end of next business day State/Local offsite agency notifications.

- Annual Report

  The Annual Radiological Environmental Operating Report (AREOR) for REMP or the Annual Radioactive Effluent Release Report (ARERR) for the RETS shall include the information listed in NEI 07-07, Objective 2.4, Acceptance Criteria b and c.

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6. **Significant (leak or spill):** An item or incident that is of interest to the public or stakeholders. It does not imply or refer to regulatory terminology nor is it intended to indicate that the leak or spill has public health and safety or environmental protection consequences.

7. **Voluntary:** Not required by statute or regulation, but is required by Exelon commitment to the NEI Ground Water Protection Initiative.

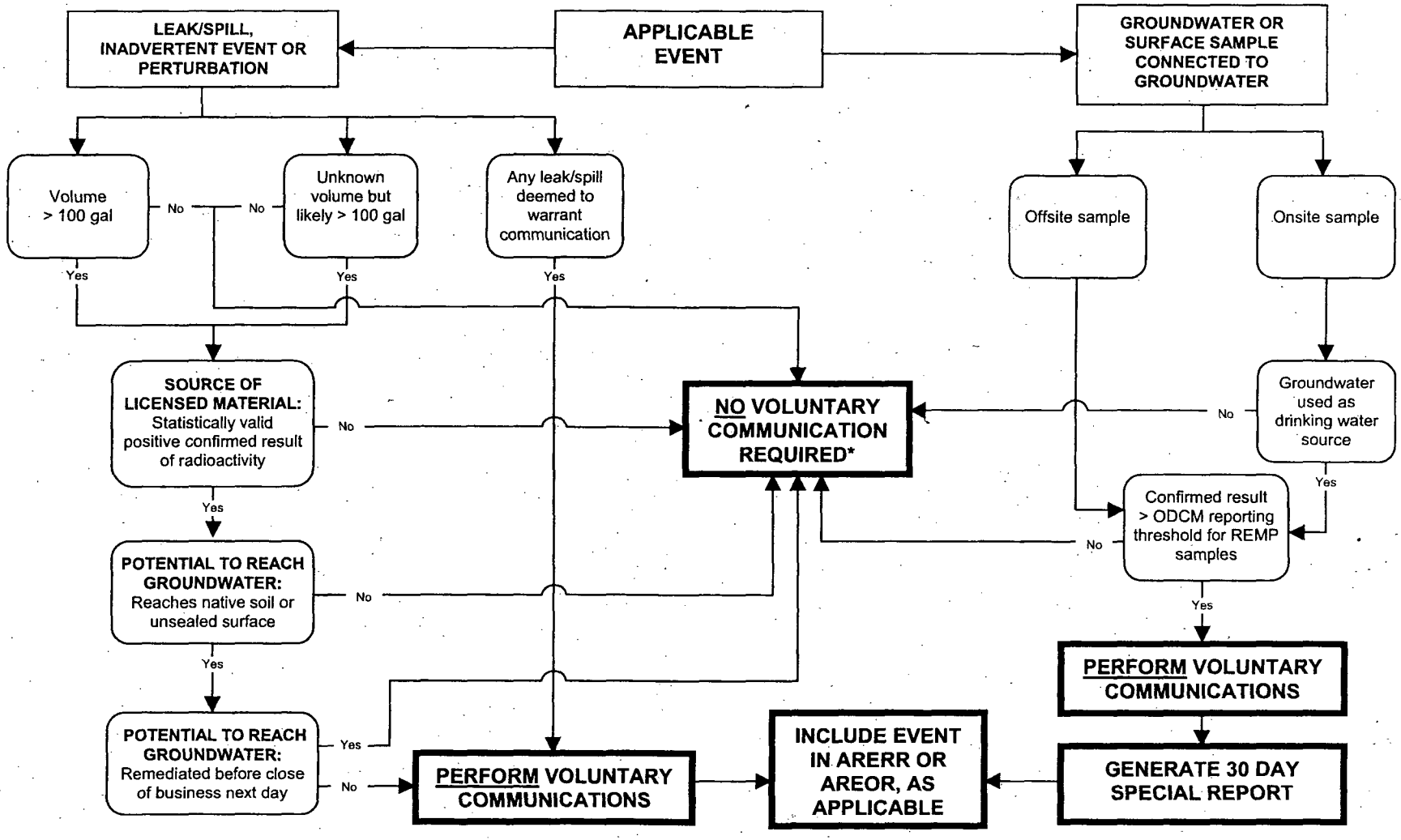
Related Reportable Events:

- RAD 1.4, Liquid Effluent Release
- RAD 1.8, Effluent Release
- RAD 1.21, Release Of Radionuclides
- RAD 1.22, Release Of Hazardous Substance (Including Radionuclides)
- RAD 3.1, Events Involving Byproduct, Source, Or SNM Causing Significant Exposure Or Release
- RAD 3.2, Events Involving Licensed Material Causing Exposure Or Release
- SAF 1.9, News Release or Notification of Other Government Agency
- RAD 3.4, Unpermitted Releases of Radionuclides at Illinois Nuclear Power Plants

References:

- NEI 07-07, Industry Ground Water Protection Initiative – Final Guidance Document (August 2007)
- NRC Regulatory Issue Summary (RIS) 2008-03, Return/Re-Use of Previously Discharged Radioactive Effluents
- CY-AA-170-4000, Radiological Groundwater Protection Program Implementation
- EN-AA-407, Response to Unplanned Discharges, Spills, and Accumulations of Licensed Radionuclides to Groundwater, Surface Water or Soil
- ANI Nuclear Liability Insurance Guideline 07-01, Potential for Unmonitored and Unplanned Off-Site Releases of Radioactive Material

ATTACHMENT 2
COMMUNICATION PROTOCOL FOR LEAK/SPILL AND GROUNDWATER SAMPLE RESULTS



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National Source Tracking System and the actual inventory by filing the reports identified by paragraphs (a) through (e) of this section. By January 31 of each year, each licensee must submit to the National Source Tracking System confirmation that the data in the National Source Tracking System is correct. [10 CFR 20.2207(g)] [NP-cc]

Discussion:

- § 20.2207(h) requires that each licensee that possesses Category 1 or 2 sources shall report its initial inventory of Category 1 or 2 sources to the National Source Tracking System by January 31, 2009.
- "Nationally Tracked Source" is defined in 10 CFR 20.1003.
- The Generation Support Radiation Protection Department coordinates all reports required by the National Source Tracking required by § 20.2207.

Related Reportable Events:

- RAD 1.1, Events Involving Byproduct, Source or Special Nuclear Material That Cause or Threaten to Cause Significant Exposure or Release
- RAD 1.5, Individual Exposure and Radiation Levels (Unplanned or Planned Special Exposures)

References:

- 10 CFR 20