NYE COUNTY NUCLEAR WASTE REPOSITORY PROJECT OFFICE

WORK PLAN

TITLE: **Borehole and Site Security Plan**	REVISION: **0** DATE: **2-10-09** PAGE: **1 of 7**
WORK PLAN NUMBER: **WP-13**	SUPERSEDES: **None**

APPROVAL

Director — Date: 2/10/09

CONCURRENCE

Geoscience Manager — Date: 2/10/09

Principal Investigator — Date: 2/10/09

Quality Assurance Officer — Date: 2/10/09

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ATTACHMENTS

1.0 INTRODUCTION

This work plan (WP) describes the requirements and procedures necessary to ensure that Nye County Nuclear Waste Repository Project Office (NWRPO) sites, boreholes, and wells are kept secure at all times. In general, sites referred to in this WP are part of the Independent Scientific Investigations Program (ISIP) or the Early Warning Drilling Program (EWDP); however, other sites administered by the NWRPO shall also be managed in accordance with this WP.

The NWRPO Geoscience Manager (GSM) is the principal investigator (PI) for the activities described in this WP. All NWRPO field personnel shall be responsible for the implementation of this WP.

All activities described in this WP shall be conducted in accordance with HSP-1.0, *Independent Scientific Investigations Program Health and Safety Plan for General Field Activities*, and EP-1.0, *Waste Management*, and shall apply to activities conducted as part of all other WPs, technical procedures, and test plans.

2.0 PURPOSE

The purpose of this WP is to ensure that reasonable steps are followed to secure all sites, boreholes, wells, and associated equipment to protect them from tampering, theft, and vandalism. This WP also provides procedures for the proper documentation and notification if instances of theft/vandalism do occur.

The NWRPO recognizes that instances of tampering/theft/vandalism may still occur when a site is properly secured; however, these instances can be minimized by following the guidelines in this WP.

3.0 BACKGROUND

Due to the remote nature of their locations, ISIP and EWDP sites, boreholes, wells, and associated equipment have historically presented targets for theft and/or vandalism. The following sections describe the activities required to minimize successful instances of theft/vandalism. It must be noted that this WP formalizes processes that have been informally implemented by NWRPO personnel for many years.

4.0 SCOPE OF WORK

The field activities conducted under the ISIP and EWDP are many and varied; however, the daily work flow can be broken into the following activities: site arrival and inspection, securing of boreholes and wells, key control, securing of sites, and reporting. Each of these activities is described in the following sections.

4.1 Site Arrival and Inspection

Upon arrival, a visual inspection of the site shall be conducted to ensure that all boreholes, wells, and equipment are in a condition similar to the one in which they were left, and have not been tampered with. Upon discovering evidence of theft, vandalism, tampering, or other nefarious

activity, field personnel shall notify the GSM and document the discovery in the scientific notebook for the field activity being conducted (if applicable). The reporting process is described in detail in Section 4.5.

At a minimum, wells and sites shall be inspected on a biannual basis (i.e., every six months). This inspection may be done as part of routine field activities (i.e., during manual water level measurements), or as a standalone activity. If the inspection is conducted as a standalone activity, the results of the inspection shall be recorded on the Site Inspection Form (Attachment A); otherwise the inspection will be documented in the scientific notebook.

4.2 Securing of Boreholes and Wells

After completing field activities for the day, field personnel shall ensure that boreholes and wells are secured in such a manner as to prevent unauthorized access. Boreholes may be secured in a variety of ways, with the drill string in or out of the hole; specific procedures will not be discussed in this WP.

Wells shall be secured with a locking cap and padlock. Cap construction may vary, but generally consists of a steel cover with a shroud to protect the padlock from tampering. In general, padlocks placed on wells will have a common key (i.e., a standard lock). A supply of these locks is kept on hand at the NWRPO. In the event that a non-standard lock is used to secure a well, it must be replaced as soon as practicable with a standard lock.

In some cases, it may be necessary to install a vault over the well head (e.g., when data loggers or other instrumentation in the well preclude the use of a locking cap). In this case, the well vault must be locked with a standard padlock prior to leaving the site.

Subsequent to locking the well and prior to leaving the site, it should be noted in the scientific notebook for the field activity being conducted that the well or vault has been locked and the site secured (described in Section 4.3).

4.3 Securing of Sites

Some field operations require the use of equipment and facilities on the site (e.g., mobile office trailer, generator sets, etc.). If these types of equipment are to be left at the site unattended overnight or longer, they must be secured following the guidelines below. Small, easily handled equipment shall be removed from the site each night and stored at an NWRPO-controlled facility.

- Portable generator sets and pump trailers with locking access panels or tool boxes must be locked, and have their hitches removed (if possible) to prevent unauthorized towing.
- Smaller portable generator sets shall be secured (using a chain and padlock, or equivalent) to objects of sufficient size to prevent their removal.
- Mobile office trailers shall be secured using the appropriate type of padlock. Depending on the type of trailer, these may be non-standard locks.

- To the extent practicable, all smaller equipment that must be left at the site should be stored inside a locking trailer or toolbox. If this is not safe or possible, the equipment should be secured with a chain and padlock (or equivalent) to objects of sufficient size to prevent their removal.

For items not addressed in the list above, field personnel must use professional judgment to determine the most appropriate security method.

Subsequent to locking the well and prior to leaving the site, it should be noted in the scientific notebook for the field activity being conducted that the well or vault has been locked and the site secured.

4.4 Key Control

Keys for NWRPO wells and facilities are considered controlled items, and shall be tracked as such. The equipment custodian (or designee) shall document the release of keys to authorized individuals through the use of a tracking database, spreadsheet, or similar. In addition, personnel who are issued keys shall be required to sign forms stating that the key(s) were issued.

Loss of a controlled key must be reported to the GSM and the equipment custodian as soon as possible. Personnel who lose keys may be responsible for the costs associated with replacing those keys.

4.5 Reporting

4.5.1 Field Personnel Responsibilities

In the event that evidence of theft, vandalism, or tampering is discovered, field personnel shall immediately notify the GSM and report the nature of the event. Field personnel shall also document, in the scientific notebook for the activity being conducted, the nature of the event as well as the notification process.

If the site where theft, vandalism, or tampering occurs is located on the Nevada Test Site (NTS), field personnel shall notify Ranch Control or the equivalent Site Operations Officer immediately after contacting the GSM.

4.5.2 GSM Responsibilities

The GSM (or designee) will notify the PI for the particular field activity being conducted if theft, vandalism, or tampering is reported by field personnel. The GSM and the PI will discuss the nature of the event, its impact on the field activity being conducted, and any modifications necessary to continue field activities. The GSM shall also notify the Director of the NWRPO as soon as reasonably possible.

Depending on the nature of the event, other governmental agencies may need to be notified. These agencies might include the Nevada Department of Environmental Protection, the Bureau of Land Management, and the Department of Energy. The GSM, in consultation with the

Environmental Compliance Coordinator (as described in EP-1.0), shall determine what agencies must be notified, and identify any remedial actions that must be conducted.

If the site where the event occurred is located on the NTS, the GSM shall notify the Department of Energy, the NTS operations office, and depending on the severity of the incident, the National Nuclear Security Administration.

5.0 MANAGEMENT

The project Quality Assurance Officer (QAO) is responsible for the coordination of the internal review of this WP and for verifying compliance with its requirements. All documents generated under this WP, including applicable scientific notebook pages and the Site Inspection Form (Attachment A), are considered Quality Assurance (QA) documents and shall be submitted to the QA Records Center in accordance with QAP-17.1 upon their return from the field to the NWRPO.

6.0 REFERENCES

EP-1.0. *Waste Management*. Environmental Management Procedure. Nye County Nuclear Waste Repository Project Office (NWRPO). Pahrump, Nevada.

HSP-1.0. *Independent Scientific Investigations Program Health and Safety Plan for General Field Activities*. Health and Safety Plan. Nye County NWRPO. Pahrump, Nevada.

QAP-17.1. *Records Management*. Quality Administrative Procedure. Nye County NWRPO. Pahrump, Nevada.

Attachment A
Site Inspection Form

Site Name or Borehole ID **NC-EWDP-**	Date	Time	Personnel	Site Status (use additional sheets if necessary)

Form WP-13-1 Rev. 0 2-10-09